

**HYPOGLYCAEMIC ACTIVITY OF THETRAN  
VIDHAI CHOORANAM**

**&**

**ANTI SPASMODIC AND ANTI HISTAMINIC  
ACTIVITY OF THIRIKADUGU MATHIRAI  
(DISSERTATION SUBJECT)**



**For the partial fulfillment of requirements to the Degree of  
DOCTOR OF MEDICINE (SIDDHA)  
(GUNAPADAM BRANCH)**

**GOVERNMENT SIDDHA MEDICAL COLLEGE**

**Tirunelveli – 627002**

**(Affiliated to the Tamilnadu Dr.M.G.R. Medical University, Chennai)**

**SEPTEMBER – 2008**

## ***CERTIFICATE***

Certified that I have gone through the dissertation submitted by **Dr.S.K.Radha Lakshmi, (Reg No : 32031507)** a student of final M.D.(S) Branch II- Gunapadam of this college and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

**Place :** Palayamkottai.

**Date :**

Head of the Department  
Branch II  
P.G Gunapadam  
Govt. Siddha Medical College  
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# INTRODUCTION

The Indian system of medicine was prominently prevalent in our country from the predawn period of civilization. It was named as Siddha Medicine after the siddhars who had shown the significance and power of its medicinal usage and value to the humanity.

The appropriate application of siddha system and medicine is surely to give a happy, healthy and harmonious life to all. Now a days, people are giving much importance to the Indian Medicine, because of its lesser side effects when compared to other system of medicines. It also gives permanent remedy for some chronic diseases.

Eraippu Erummal is one of the most common diseases which agonises the humanity constantly. There are number of medicines in siddha to cure kapha disease, in both acute and chronic stages. Thirikadugu mathirai is an excellent remedy for Eraippu Erummal.

Keeping this in mind the author has selected Thirikadugu mathirai for Eraippu Erummal in this dissertation.

## **AIM AND OBJECTIVES**

Now a days the siddha system is flourishing in the medical world as one of the best alternative system of medicine. The treatment of respiratory disorder is unfulfilled without the use of steroids and no doubt the steroids have its own adverse effect.

But the use of Thirikadugu mathirai does not affect the precious life of the human beings. The author has been interest in treating respiratory disorders. So the author has decided to study Thirikadugu mathirai for Eraippu Erummal.

Eraippu Erummal is prevalent during the rainy season and in particular the hereditary, climate, pollution, and dietic habits.

The development of Siddha system required the intense research in various departments, otherwise it will not thrive in socials. So to give more importance to the system, the author's ambition is to give the realistic contribution to the development of the Siddha Gunapadam department.

# REVIEW OF LITERATURE

## CHEMICAL ASPECT

Borax is also known as Sodium borate, Sodium tetra borate or disodium tetraborate.

### Natural Sources:

Borax occurs naturally in evaporite deposits produced by the repeated evaporation of seasonal lakes. Borax can also be produced synthetically from other boron compounds.

**Molecular formula:**  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$   
 $\text{Na}_2\text{O} - 16.2\%$   
 $\text{B}_2\text{O}_3 - 36.6\%$   
 $\text{H}_2\text{O} - 47.2\%$

### Physical properties:

Appearance – white solid  
Odour – Balsamic odour  
Taste – Like papadakhhar  
Density –  $1.738 \text{ km}^3$   
Melting point –  $741^\circ\text{C}$   
Colour – Greyish White

### Fracture:

Brittle – Conchoidal – very brittle  
Fracture producing small, conchoidal fragments.

### Habit:

Massive – Uniformly indistinguishable crystals forming large masses.

Prismatic	– Crystals shaped the slender prisms.
Tablar	– Form dimensions are thin in one direction.
Luster	– Greasy
Streak	– White

Chemical components that differ in their crystals water content.

Anhydrous borax –  $\text{Na}_2\text{B}_4\text{O}_7$

Borax pentahydrate –  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 5 \text{H}_2\text{O}$

Borax decahydrate –  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$

Borax is generally described as  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$ . However it is better formulated as  $\text{Na}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 8\text{H}_2\text{O}$ , Since borax contains the  $[\text{B}_4\text{O}_5(\text{OH})_4]^{2-}$  ion. In this structure, there are two-four co-ordinate boron atoms (two  $\text{BO}_4$  tetrahedra) and two-three coordinate boron atoms (two  $\text{BO}_3$  triangles).

### **Characters:**

It is composed of boric acid and soda. In the native state, it exists as an impure saline incrustation of a dirty white odour. It exists as crystalline tough masses or in the form of translucent irregular masses. Exposed to the air it becomes opaque. Another variety known as ‘Telio Tankana’ is an impure salt met with in small piece or smooth translucent six sided crystals.

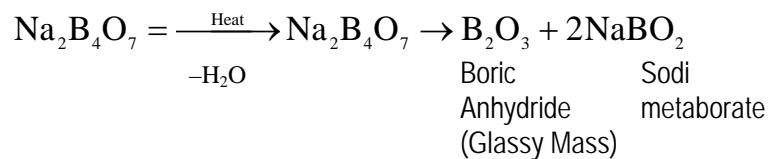
### **Mining and Preparation:**

The bedded borate deposits are extracted by underground mining methods, and the mineral materials are crushed and roasted to remove the water. Various constituents are separated by evaporation followed by crystallisation.

During evaporation Sodium Carbonate, Sulphide and Chloride are precipitated, borax and other salts which are then refined to pure borax.

### **Action of Heat:**

On heating, Borax loses its water of crystallisation and swells up to a white porous mass. On further heating it melts to a liquid which then solidifies to a transparent glassy mass which consists of Sodium meta borate ( $\text{NaBO}_2$ ) and Boric anhydride ( $\text{B}_2\text{O}_3$ ).



# **BOTANICAL ASPECTS**

## **ZINGIBER OFFICINALE**

### **Classification:**

Kingdom	–	Plantae
Division	–	Magnoliophyta
Class	–	Monocotyledens
Subclass	–	Zingiberidae
Order	–	Zingiberales
Family	–	Zingiberaceae

### **Habitat:**

India on a large scale in the warm, moist regions, chiefly in madras, cochin, Travancore.

### **Parts Used:**

Scraped and dried rhizomes.

### **Constituents:**

It is containing camphene, phelladrene, zingiberine, cineol and borneol, gingerol; An oleoresin gingerin & K-oxalate.

### **Uses:**

Dried ginger is of two kinds, peeled and unpeeled, the latter being merely the cleaned rhizomes dried in the sun. In the case of the dry specimen, the outer layer should be scrapped off.

Dry ginger is much used as a carminative adjunct along with black pepper and long pepper under the name of Thirikatugu.



Dry ginger is generally used as a corrective adjunct to purgatives to prevent nausea and griping. It is best given either in powder in doses of 10-30 grains, which may be taken with 5 grains of carbonate of sodium or potash in gout and chronic rheumatism. For indigestion, loss of appetite, powder mixed with ghee or hot water, acts as a nice remedy.

### **PIPER NIGRUM**

Kingdom	– Plantae
Division	– Magnoliophyta – Flower plants
Class	– Magnolipsida – Dicots
Order	– Piperales
Family	– Piperaceae

#### **Distribution:**

Piper Nigrum is distributed throughout India in the evergreen forests up to 1500 c.m. elevations.

#### **Cultivation and Habitat:**

In India pepper is cultivated mostly as a mixed crop in home stead gardens. Pepper requires a warm and humid climate. This perennial climbing shrub is indigenous to malabar and Travancore coasts, i.e. western coast of India.

**Habit:** A branching climbing, perennial shrub, climbing root arise from the nodes. The nodes are swollen.

**Seeds:** Usually globose, testa–thin, albumin-hard.

- Flora at British India Vol.I. Page 78

**Part Used:** Dried unripe fruit – black pepper.

### **PIPER LONGUM**

Kingdom – Plantae  
Division – Magnoliophyta  
Class – Magnoliopsida  
Order – Piperales  
Family – Piperaceae

**Habitat:** This plant is indigenous to North Eastern and Southern India and Ceylon and cultivated in Eastern Bengal.

**Parts Used:**

Immature berries dried in the sun and steams.

**Constituents:**

Resin, volatile oil, starch, gum, fatty oil, inorganic matter and an alkaloid, piperine.

**Uses:**

Old long pepper is more efficacious in medicine than fresh article. Powdered long pepper administered with honey will relieve cough, cold, asthma, hoarseness and hiccup.

– The Indian Materia medica page 965.

### **Piper Betle**

Kingdom – Plantae  
Division – Magnoliophyta  
Class – Magnoliopsida

Order – Piperales

Family – Piperaceae

Part Used : Leaf

Constituents:

Alcoloid – Arakene

Volatile oil – Sesqueterpene

Fenol – Chavicol

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### ÁøPPÒ:

£aø\ªÍS	– A green variety of pepper
öÁÒøÍªÍS	– White pepper
ÁõÀªÍS	– Piper cubeba

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வெங்காரம்



சுத்தித்த வெங்காரம்



சுக்கு



மிளகு



திப்பிலி



## **MATERIALS AND METHODS**

In this dissertation the Thirikadugu Mathirai was taken as a compound drug study. This drug was prepared as per to specification given in the Anuboga Vaithiya Deva Ragasiyam Vol. 4 Page 500.

### **Collection of the test drug:**

The raw drugs Venkaram, Chukku, Milagu, Thippili were collected from the Pharmacy Raw drug store, Govt. Siddha Medical College, Palayamkottai.

### **Purification of the test drug:**

Venkaram was fried in an Agal, till all the water content evaporates.

Outer skin of the chukka was removed.

Milagu and Thippili were roasted.

### **Preparation of the test drug:**

Purified Venkaram, Chukku, Milagu, Thippili were taken in equal quantities, placed in Kalvam and powdered well. Then it was sieved through a fine cotton cloth. (Vastharakayam)

The fine powder was placed in Kalvam, rubbed with Vetrilai juice and rolled into pills (Mathirai) of Two Kundri size. (260 mgs)

**Route of Administration:** Entral

**Dose :** 260 mg Bi a day with hot water.

The Mathirai prepared was subjected to,

– Bio Chemical Analysis



- Pharmacological Analysis
- Antibacterial Analysis
- Clinical Assessment.

திரிகடுகு மாத்திரை



# BIO CHEMICAL ANALYSIS OF THIRIKADUGU MATHIRAI

## Preparation of the extract

100 mgs. of Mathirai is weighed accurately and placed into a clean beaker and added a few drops of conc. Hydrochloric acid and evaporated it well. After evaporation cooled the content and added a few drops of conc. Citric acid and evaporated it well. After cooling the content add 20 ml. Of distilled water mix well filter it. Then it is taken for analysis.

## Qualitative Analysis

Sl. No.	Experiment	Observation	Inference
1.	<b>Test of Calcium</b> 2 ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% Ammonium oxalate solution is added.	No White precipitate is formed.	Absence of calcium.
2.	<b>Test of Sulphate</b> 2 ml of the extract is added to 5% barium Chloride solution.	No white precipitate is formed.	Absence of sulphate.
3.	<b>Test of Chloride</b> The extract is treated with silver nitrate solution.	No white precipitate is formed.	Absence of chloride.
4.	<b>Test of Carbonate</b> The substance is treated with concentrated Hydrochloric Acid.	No break effervescence is formed.	Absence of Carbonate.
5.	<b>Test for Starch</b> The extract is added with Potassium Ferro cyanide.	Blue colour is formed.	Indicates the <b>presence</b> of starch.
6.	<b>Test for Iron</b> <b>Ferric:</b> The extract is treated with glacial acid and Potassium Ferro Cyanide	No Blue colour is formed.	Absent of ferric iron.
7.	<b>Test for Ferrous Iron:</b> The extract is treated with concentrated	Blood red colour is formed.	Indicates

	Nitric acid and ammonium thio cyanide.		trace amount of ferrous Iron is <b>present</b> .
8.	<b>Test for Phosphate</b> The extract is treated with Ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed.	Absence of phosphate.
9.	<b>Test for Albumin</b> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin.
10.	<b>Test for Tannic Acid</b> The extract is treated with ferric chloride.	No blue black precipitate is formed.	Absence of Tannic acid.
11.	<b>Test for Unsaturation</b> Potassium Permanganate solution is added to the extract.	It gets decolourised.	Indicates the <b>presence</b> of unsaturated compound.
12.	<b>Test for reducing Sugar</b> 5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8 – 10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of reducing sugar.
13.	<b>Test of Amino Acid</b> One or two drops of the extract is placed on a filter paper and dried it well, after drying 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed.	Indicates the <b>presence</b> of Amino acid.

### **Inference**

The given sample of drug Thirukadugu Mathirai contains Starch, Ferrous Iron, Amino acids and unsaturated compound.

# **PHARMACOLOGICAL ANALYSIS**

## **ANTI-SPASMODIC EFFECT OF THIRIKADUGU MATHIRAI ON ISOLATED RABBIT ILEUM**

### **Aim:**

To find out the anti-spasmodic effect of Thirukaduga Mathirai isolated Rabbit ileum.

### **Preparation of the Test Drug**

400 mg of Thirikadugu Mathirai was dissolved in 10 ml of water. 1 ml of this solution contains 40 mg of drug.

### **Solutions Required**

Acetyl – Choline – 10 mg/ml, Homatropine 10 mg/ml

Test Drug (Thirikadigu Mathirai) 40 mg/ ml

### **Nutrient Solution**

Tyrode – 1 to 2 litres

### **Tissue Used**

Rabbit ileum

### **Apparatus Required**

Student's Organ bath, Sherrington rotating drum.

### **Procedure**

A rabbit was starved for 48 hours and was allowed water ad-libitum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileo-caecal junction was found out. A small piece

of ileal portin was cut, removed and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3 cms length segment was cut from this part of ileum and was tied with thread on both ends without closing of lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained 37°C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Acetyl-choline. 0.2 ml (10mg/ml) of Acetyl-choline was added and allowed to run the drum for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Acetyl-choline was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10 mg/ml) Acetyl choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Acetyl-choline solution and test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of Acetyl-choline. The drum was allowed to run for 30 seconds. The response was recorded.

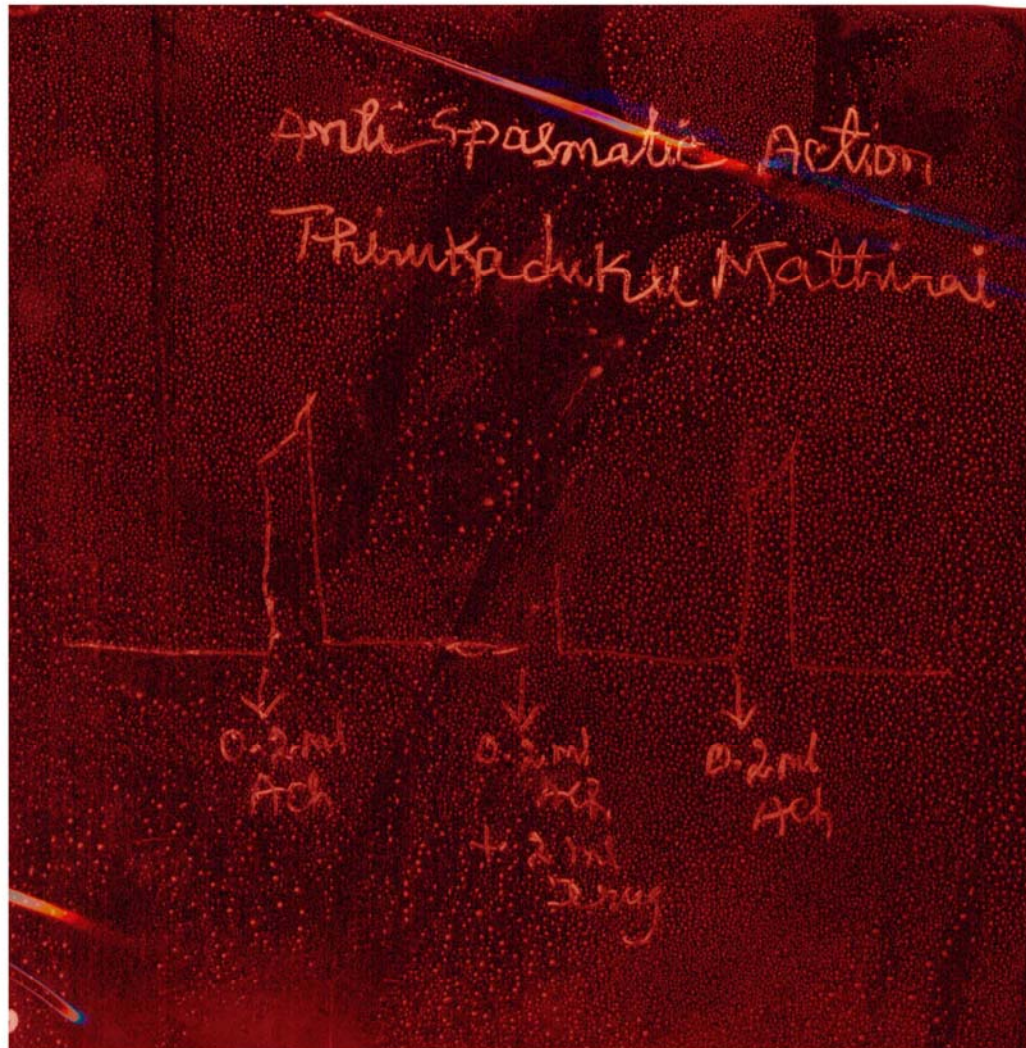
Then 0.2 ml of Homatropine and 0.2 ml of Acetyl-choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph

and it seems to be a baseline. Then 0.2 ml of Acetylcholine was added to standardise the tissue. Then the tracing was labeled and fixed.

### **Inference**

From the graph it is inferred that the last drug antagonise the effect of Acetylcholine when added together. So the drug has got **significant and anti-spasmodic effect**.

# Anti Spasmodic Action Thirikaduku Mathirai





# **ANTI-HISTAMINE STUDY OF THIRIKADUGU MATHIRAI ON ISOLATED GUINEA PIG ILEUM.**

## **AIM**

To study the anti-histamine effect of Thirikadugu Mathirai on isolated Guinea Pig ileum.

## **PREPARATION OF THE TEST DRUG**

250 mg of Thirikadugu Mathirai was dissolved in 10 ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

## **SOLUTIONS REQUIRED**

Histamine-1 in 100,000 strength, Anti-histamine (Pheniramine maleate 22.75 mg/ml)

Test drug Thirikadugu Mathirai – 25 mg/ml.

## **NUTRIENT SOLUTION**

Tyrode – 1 to 2 litres

## **TISSUE USED**

Guinea Pig ileum

## **APPARATUS REQUIRED**

Student's organ bath, Sherrington rotating drum.

## **PROCEDURE**

An overnight fasted Guinea Pig weighing about 400 gms was sacrificed by a blow on the head and by carotid bleeding. The abdomen was suddenly opened and ileo caecal junction was found out. A small piece of ileal portion

was cut and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3 cms length segment was cut from this part of ileum, and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37°C and bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Histamine. 0.2 ml (10mg/ml) of Histamine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Histamine was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10 mg/ml) Histamine was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Histamine solution and test drug solutions were washed out. Then the above experiment was done for 0.2 ml dose of Histamine. The drum was allowed to run for 30 seconds. The response was recorded.

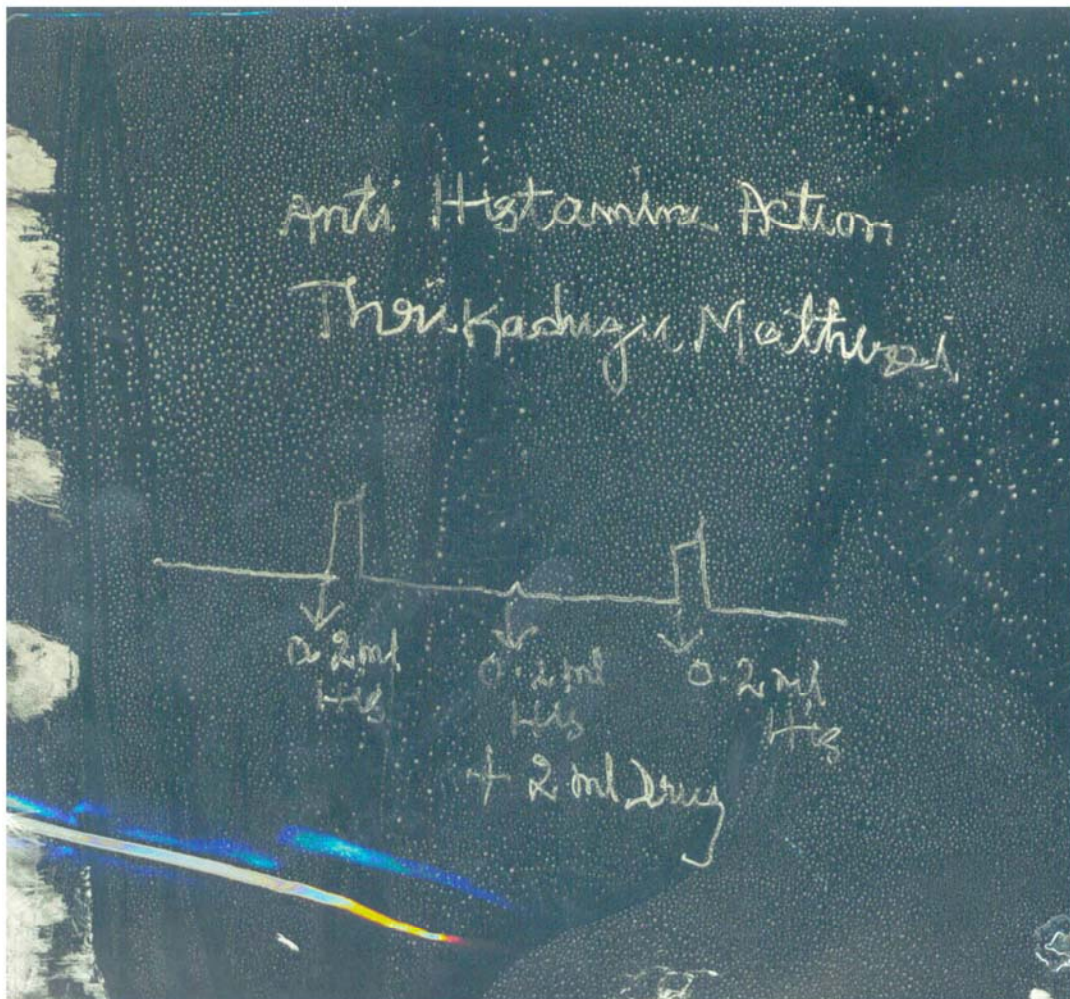
Then 0.2 ml of Anti-histamine and 0.2ml of Histamine was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph and

it seems to be a baseline. Then 0.2 ml of Histamine was added to standardise the tissue. Then the tracing was labelled and fixed.

#### **INFERENCE :**

From the graph it is inferred that the test drug antagonise the effect of Histamine when added together. So the drug has got **significant anti-histamine activity**.

Anti Histamin Action  
Thirikaduku Mathirai



# **ANTI – BACTERIAL ACTIVITY OF THIRIKADUGU MATHIRAI**

## **TESTING FOR THIRIKADUGU MATHIRAI DISC SENSITIVITY BY KIRBY BAYER METHOD.**

The sensitivity of the disc is determined by Kirby Bayer Disc Diffusion method.

### **AIM**

To determine the Antimicrobial activity of an antibiotic against the test organism.

### **PRINCIPLE**

The principle of antibiotic sensitivity test are simple, disc saturated with known concentration of antibiotic is placed on agar plates that has been inoculated with the test organism. The disc pick up the moisture and the antibiotic diffuses radially outward through the agar producing an antibiotic concentration. Gradient effectiveness of susceptibility is proportional to the diameter of the inhibitory zone around the disc. organism which grows upto the edge of the disc are resistant.

The recommended medium in this method is Muller Hinton Agar its PH should be between 7.2 – 7.4 and should be poured to uniform thickness of 4mm in the petriplate (25ml) for certain fastidious microorganism.

## METHODOLOGY

- ❖ Muller Hinton Agar plates are prepared and *Pseudomonas*, *Vibrio cholerae*, *E.coli*, *Bacillus*, *Klebsiella*, *Micrococcus*, *Streptococcus* is swabbed separately.
- ❖ The prepared discs of antibiotics Thirikadugu Mathirai are placed over the incubated plate using sterile forceps and incubated for 24 hours at 37° Celsius.
- ❖ The plates after 24hours incubation are observed for zone of inhibition.

## RESULT

The diameter of zone of inhibition Thirikadugu Mathirai on  
*Strepto coccus pneumoniae* 1.3mm

## KIRBY BAYER ANTIMICROBIAL SUSCEPTIBILITY METHOD

### RESULT TABLE

S.No.	Antibiotic	Gram Negative Organism (culture)	Zone Size (mm)	Susceptibility	
				Sensitivity	Resistance
1	Thirikadugu Mathirai	<i>Pseudomonas aeruginosa</i>	0.7mm	+	-

## CLINICAL ASSESSMENT

A clinical trial was done on 35 cases of different age and both sex. They were clinically diagnosed as Eraippu Erumal, according to our siddha literatures. Among them 30 patients were treated as out patient and 5 patients were treated as in PG Department of GUNAPADAM, Government Siddha Medical College Hospital, Palayamkottai.

Patients were thoroughly examined and enquired and all the clinical features complete history, hygienic conditions, surroundings, occupations were noted. Personal habit, previous illness, dietary details and allergens to specific things were recorded.

They were of different severity of signs and symptoms like difficulty in breathing, cough with expectoration, tightness of chest and sometimes having other upper respiratory tract disease symptoms. The duration of illness was also variable. They had different etiology.

The routine blood investigations were done in each case, sputum for AFB, Radiological investigations also carried out. Radiological investigations were mainly used to rule out other causes and diseases.

The cases were screened as per the following criteria's and selected from the outpatient and inpatient department of the GSMCH Palayamkottai.

### **Eraippu Erumal-Including Criteria**

- Cough, Nocturnal cough, Paroxysm of cough.

- Difficulty in breathing.
- Expectoration.
- Sputum color and quantity without gross abnormalities such as blood stain sputum, abnormally large quantity of sputum.
- History of Allergic Substances.
- Sneezing.
- Allergic Rhinitis
- Differential count-especially Eosinophil.
- Respiratory system examination added sounds-Rhonchi.
- Radiological investigation-Normal study, Bronchitis, chronic Bronchitis.

#### **Eraippu Erumal-Excluding Criteria**

- Facial puffiness
- Abdominal distension
- Pedal oedema
- Hepatomegaly
- Paroxysmal Nocturnal dyspnoea
- Orthopnoea
- Evening raise of temperature.
- Sputum for AFB positive
- Albuminuria
- Increased blood urea and serum creatinine



- Status Asthmaticus
- High fever with raised ESR

### **Line of treatment**

The drug Thirikadugu mathirai was administered internally in dose of 260mg two times a day with hot water after diet to each case for two six weeks or above according to severity of symptoms.

### **Diet and advice for Eraippu Erumal**

- In take of hot water and hot foods.
- Avoid chill weather.
- Avoidance of factors which cause digestive disturbances.
- Avoidance of allergic factors.
- Avoidance of smoking.
- Taking bath strictly in hot water.
- Advised to take dinner before 8 p.m.
- Avoidance of stress.
- Advised to practice pranayamam and yogasanam regularly.

### **Observation**

The results were assessed on the basis of symptomatic relief obtained by the patient and clinically by daily examination of in-patient department and subsequent visits in out-patient department.

Out of 30 cases 14 cases were male and remaining 6 cases were female patients. 8 patients had evidence of this particular disease in their family, 4 cases had history of allergy. Almost all the patients were labours and farmers of poor socio-economic status. Among the male patients most of them were chronic smokers.

During the treatment, the cases are thoroughly interrogated and examined regularly. The clinical improvements were recorded for every 3 days for in-patients. The clinical investigations were done for the patients before and after the treatment and the prognosis was noted.

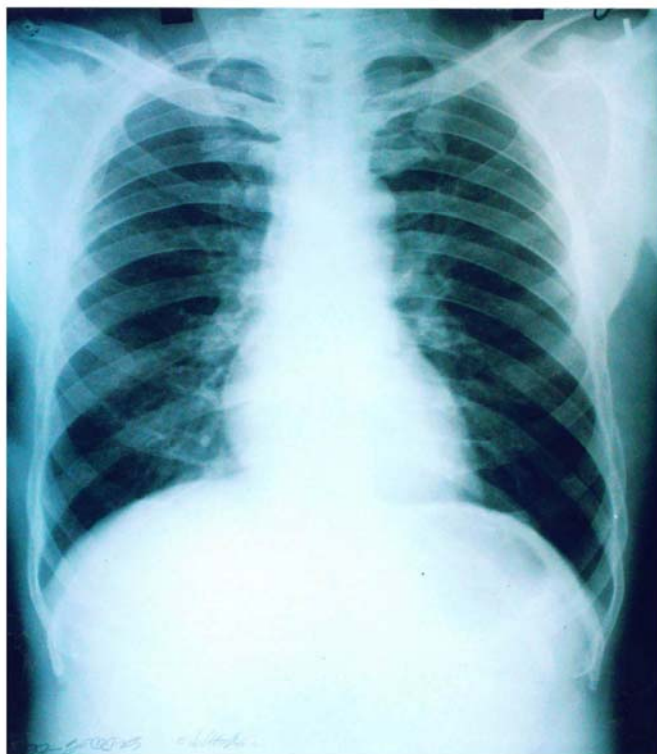
## **Result**

Among 30 cases 25 cases (83.3%) showed good response, 4 cases 13.3% show fair response and 1 case (3.4%) showed poor response.

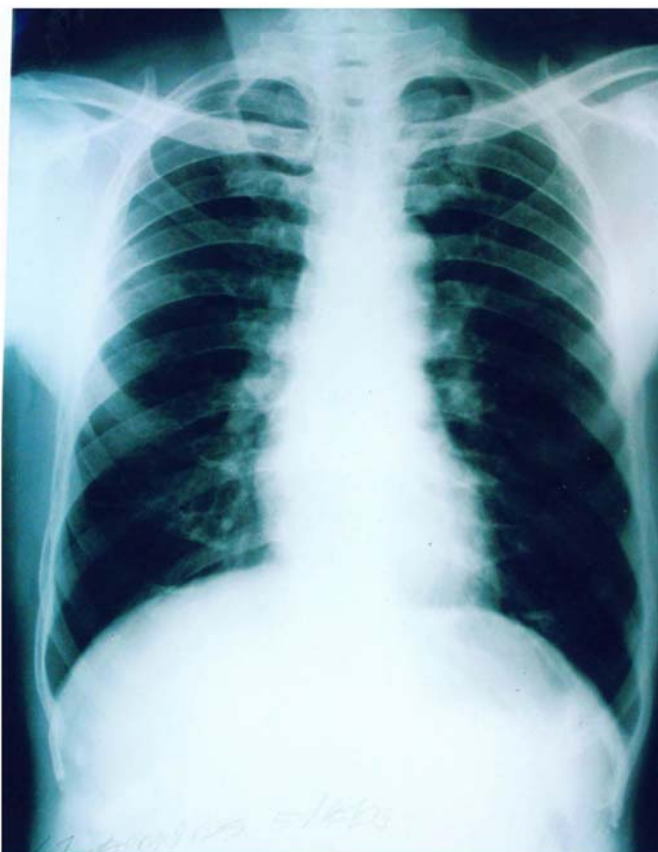
**Table Illustrating the improvement and their percentages**

S.No.	Result	No.of Patient	Percentage
1.	Good	25	83.3%
2.	Fair	4	13.3%
3.	Poor	1	3.4%
	<b>Total</b>	<b>30</b>	<b>100%</b>

Before Treatment



After Treatment



# BIO – STATISTICAL ANALYSIS OF THIRIKADUGU MATHIRAI

## Eraippu Erumal → Thirikadugu Mathirai

The chemical trials of Thirikadugu mathirai were analysed based on their age and sex. The results of the analysis are enumerated into the below table.

**Table-1**

### Age and Sexwise distribution of Eraippu Erumal Study subjects

Sl. No.	Sex	n	Age		‘t’	Significance	95% of the C.I. of pope and mean
			Mean	S.D.			
1	Male	19	55.36	15.06	1.357	P > 0.05	–
2	Female	6	46.17	12.15			
	<b>Total</b>	25	53.16	14.73	–	–	47.1 to 59.2 years.

The mean ages of male and female are  $55.36 \pm 15.06$  and  $46.17 \pm 12.15$  respectively. By observation, there is a difference between the mean ages between the sexes. But the difference is not statistically significant. That means in respect of age both sexes are equal and if there is any difference that may be due to sampling fluctuations. The Eraippu Erumal population mean age may be in between 47.1 to 59.2 years at 95% confidence interval.

### Related variables:

The related variables of Eraippu Erumal study subjects are Esenophillio, E.S.R and Respiratory rates. The three variables were recorded before and after the administrative of the drug Thirikadugu Mathirai. The observed results are posted in the below table.

**Table-2**

**The Eschino, E.S.R. ½ hour, E.S.R. 1 hour and Respiratory rates of study subjects before and after treatment (Percentage)**

Sl.No	Variable	n	Before Treatment		After Treatment		Difference of Mean	‘t’	Significance
			Mean	S.D.	Mean	S.D.			
1.	Eseinol	25	5.4	1.85	3.7	1.7	1.7	4.739	P < 0.000
2.	E.S.R. – ½ hour	25	11.6	2.2	9.8	1.3	1.8	4.688	P < 0.000
3.	E.S.R. – 1 hour	25	23.4	4.7	20.0	2.7	3.4	4.37	P < 0.000
4.	Respiratory rate	25	23.9	0.83	18.4	1.3	5.5	29.837	P < 0.000

The above analyses of variables before and after treatment clearly shows the following statistics. The mean Eseinophilia before and after treatment are  $5.4 \pm 1.83$  and  $3.7 \pm 1.7$ . The difference of mean is statistically significant. The mean E.S.R. 1 hour before and after treatment are recorded as  $23.4 \pm 4.7$  and  $20.0 \pm 2.7$  respectively. The difference between the E.S.R% is statistically highly significant. The respiratory rate before and after treatment is  $23.9 \pm 0.83$  and  $18.4 \pm 1.3$  respectively. The difference observed is statistically significant since the  $t=29.837$  and  $P < 0.000$ . The mean reductions of E.S.R and Respiratory rate are 1.7%, 3.4% and 5.5% respectively, and the reductions are statistically significant reductions of Esen. E.S.R and Respiratory rate are attributed to the effectiveness of the drug Thirikadugu Mathirai.

## DISCUSSION

The author chooses the disease Eraippu Erumal, one of the Kabha disease which is one among the 21 varieties.

According to Siddha concept, the basic abnormality of Eraippu Erumal is derangement of Kabha humour.

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Thus the affecting Kabha humour reflect the clinical symptoms like difficulty in breathing, wheezing, running nose, sneezing and cough with scanty expectoration.

This signs and symptoms were relieved by the administration of the drug “Thirikadugu Mathirai”.

The literature collections were collected from various literatures. From these information, the author has come to an idea about Thirikadugu Mathirai and its efficacy in Eraippu Erumal.

Bio-Chemical analysis showed that it contains Starch, Ferrous Iron, Amino Acid and unsaturated compounds.

Pharmacological analysis shows that the Thirikadugu Mathirai has got moderate anti spasmodic effect and antihistamine effect.

In this clinic study out of 20 cases suffered from Eraipu Erumal 16 (80%) showed good response of sign and symptoms and 3 cases (15%) showed fair response & 1 case (5%) showed poor response to drug.

During the treatment, the patients have no signs and symptoms of toxic effect. Non toxic nature of this trial drug in the recommended dose was found to be effective even after the withdrawal of the medicine.

## SUMMARY

- The drug Thirikadugu Mathirai has been taken to the study to establish its efficacy in Eraippu Erumal as the important aspect of this dissertation work. The dose of the Thirikadugu Mathirai 260 mgm two times a day (BD) with hot water after diet.
- A review of literature about the drug and its significance in medicine in ancient days, collected information about the drug and various literatures were referred.
- Bio Chemical analysis showed the drug has got Starch, Ferrous Iron, Amino Acid, Unsaturated Compounds are helpful in its valuable clinical effects.
- Pharmacological analysis established that the drug has got moderate anti-spasmodic and antihistamine effects.
- From the clinical assessment, it is inferred that the drug has a marked response in Eraippu Erumal. During the clinical trial author also inferred that the drug has no known contradictions. The drug has no adverse effect.



## CONCLUSION

It is concluded that the drug Thirikadugu Mathirai has got significant **anti-spasmodic and anti-histamine action** and clinically it is an effective drug in Eraippu Erumal for reducing its severity and difficulties.

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# INTRODUCTION

The Indian system of medicine was prominently prevalent in our country from the predawn period of civilization. It was named as Siddha Medicine after the siddhars who had shown the significance and power of its medicinal usage and value to the humanity.

The appropriate application of siddha system and medicine is surely to give a happy, healthy and harmonious life to all. Now a days, people are giving much importance to the Indian Medicine, because of its lesser side effects when compared to other system of medicines. It also gives permanent remedy for some chronic diseases.

Eraippu Erummal is one of the most common diseases which agonises the humanity constantly. There are number of medicines in siddha to cure kapha disease, in both acute and chronic stages. Thirikadugu mathirai is an excellent remedy for Eraippu Erummal.

Keeping this in mind the author has selected Thirikadugu mathirai for Eraippu Erummal in this dissertation.

## **AIM AND OBJECTIVES**

Now a days the siddha system is flourishing in the medical world as one of the best alternative system of medicine. The treatment of respiratory disorder is unfulfilled without the use of steroids and no doubt the steroids have its own adverse effect.

But the use of Thirikadugu mathirai does not affect the precious life of the human beings. The author has been interest in treating respiratory disorders. So the author has decided to study Thirikadugu mathirai for Eraippu Erummal.

Eraippu Erummal is prevalent during the rainy season and in particular the hereditary, climate, pollution, and dietic habits.

The development of Siddha system required the intense research in various departments, otherwise it will not thrive in socials. So to give more importance to the system, the author's ambition is to give the realistic contribution to the development of the Siddha Gunapadam department.

# REVIEW OF LITERATURE

## CHEMICAL ASPECT

Borax is also known as Sodium borate, Sodium tetra borate or disodium tetraborate.

### Natural Sources:

Borax occurs naturally in evaporite deposits produced by the repeated evaporation of seasonal lakes. Borax can also be produced synthetically from other boron compounds.

**Molecular formula:**  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$   
 $\text{Na}_2\text{O}$  – 16.2%  
 $\text{B}_2\text{O}_3$  – 36.6%  
 $\text{H}_2\text{O}$  – 47.2%

### Physical properties:

Appearance – white solid  
Odour – Balsamic odour  
Taste – Like papadakhhar  
Density –  $1.738 \text{ km}^3$   
Melting point –  $741^\circ\text{C}$   
Colour – Greyish White

### Fracture:

Brittle – Conchoidal – very brittle  
Fracture producing small, conchoidal fragments.

### Habit:

Massive – Uniformly indistinguishable crystals forming large masses.

Prismatic	– Crystals shaped the slender prisms.
Tablar	– Form dimensions are thin in one direction.
Luster	– Greasy
Streak	– White

Chemical components that differ in their crystals water content.

Anhydrous borax –  $\text{Na}_2\text{B}_4\text{O}_7$

Borax pentahydrate –  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 5 \text{H}_2\text{O}$

Borax decahydrate –  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$

Borax is generally described as  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$ . However it is better formulated as  $\text{Na}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 8\text{H}_2\text{O}$ , Since borax contains the  $[\text{B}_4\text{O}_5(\text{OH})_4]^{2-}$  ion. In this structure, there are two-four co-ordinate boron atoms (two  $\text{BO}_4$  tetrahedra) and two-three coordinate boron atoms (two  $\text{BO}_3$  triangles).

### **Characters:**

It is composed of boric acid and soda. In the native state, it exists as an impure saline incrustation of a dirty white odour. It exists as crystalline tough masses or in the form of translucent irregular masses. Exposed to the air it becomes opaque. Another variety known as ‘Telio Tankana’ is an impure salt met with in small piece or smooth translucent six sided crystals.

### **Mining and Preparation:**

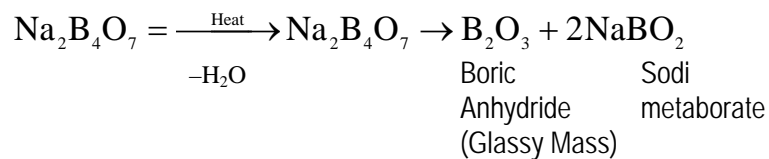
The bedded borate deposits are extracted by underground mining methods, and the mineral materials are crushed and roasted to remove the water. Various constituents are separated by evaporation followed by crystallisation.



During evaporation Sodium Carbonate, Sulphide and Chloride are precipitated, borax and other salts which are then refined to pure borax.

**Action of Heat:**

On heating, Borax loses its water of crystallisation and swells up to a white porous mass. On further heating it melts to a liquid which then solidifies to a transparent glassy mass which consists of Sodium meta borate ( $\text{NaBO}_2$ ) and Boric anhydride ( $\text{B}_2\text{O}_3$ ).



# **BOTANICAL ASPECTS**

## **ZINGIBER OFFICINALE**

### **Classification:**

Kingdom	–	Plantae
Division	–	Magnoliophyta
Class	–	Monocotyledens
Subclass	–	Zingiberidae
Order	–	Zingiberales
Family	–	Zingiberaceae

### **Habitat:**

India on a large scale in the warm, moist regions, chiefly in madras, cochin, Travancore.

### **Parts Used:**

Scraped and dried rhizomes.

### **Constituents:**

It is containing camphene, phelladrene, zingiberine, cineol and borneol, gingerol; An oleoresin gingerin & K-oxalate.

### **Uses:**

Dried ginger is of two kinds, peeled and unpeeled, the latter being merely the cleaned rhizomes dried in the sun. In the case of the dry specimen, the outer layer should be scrapped off.

Dry ginger is much used as a carminative adjunct along with black pepper and long pepper under the name of Thirikatugu.

Dry ginger is generally used as a corrective adjunct to purgatives to prevent nausea and griping. It is best given either in powder in doses of 10-30 grains, which may be taken with 5 grains of carbonate of sodium or potash in gout and chronic rheumatism. For indigestion, loss of appetite, powder mixed with ghee or hot water, acts as a nice remedy.

### **PIPER NIGRUM**

Kingdom	– Plantae
Division	– Magnoliophyta – Flower plants
Class	– Magnolipsida – Dicots
Order	– Piperales
Family	– Piperaceae

#### **Distribution:**

Piper Nigrum is distributed throughout India in the evergreen forests upto 1500 c.m. elevations.

#### **Cultivation and Habitat:**

In India pepper is cultivated mostly as a mixed crop in home stead gardens. Pepper requires a warm and humid climate. This perennial climbing shrub is indigenous to malabar and Travancore coasts, i.e. western coast of India.

**Habit:** A branching climbing, perennial shrub, climbing root arise from the nodes. The nodes are swollen.

**Seeds:** Usually globose, testa–thin, albumin-hard.

**Part Used:** Dried unripe fruit – black pepper.

### **PIPER LONGUM**

Kingdom – Plantae  
Division – Magnoliophyta  
Class – Magnoliopsida  
Order – Piperales  
Family – Piperaceae

**Habitat:** This plant is indigenous to North Eastern and Southern India and Ceylon and cultivated in Eastern Bengal.

**Parts Used:**

Immature berries dried in the sun and steams.

**Constituents:**

Resin, volatile oil, starch, gum, fatty oil, inorganic matter and an alkaloid, piperine.

**Uses:**

Old long pepper is more efficacious in medicine than fresh article. Powdered long pepper administered with honey will relieve cough, cold, asthma, hoarseness and hiccup.

– The Indian Materia medica page 965.

### **Piper Betle**

Kingdom – Plantae  
Division – Magnoliophyta  
Class – Magnoliopsida

Order – Piperales

Family – Piperaceae

Part Used : Leaf

Constituents:

Alcoholoid – Arakene

Volatile oil – Sesquiterpene

Phenol – Chavicol

# GUNAPADAM ASPECT

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**Eøμ:** öÁ[Põμ® Pkμézøu²®, Eèn Ã°¯ ®, wôn, ,Í Sn[PøÍ²®, PkÂ£õPzøu²®  
Eøh¯ x.

Áõu®, \_Áõé®, uõÁμÂå®, P£® CÁØøÓ¨ ÷£õUQ w£Úzøu Â,zv ö\²®.

©»£¢u® }[S®. ¢zu® AvP›US®.

&£uõºzu Sn ©g\› £UP® 118

öõÔ!øhö¯ s Sß©,ø© ÷\õ› ¯ õ\®

£ÔQµPo PÀ¾Ú® £ß÷Úõ´ ö|Ôø¯ z  
uh[Pñ[P £[Q,ª \°£Âhg \ø{  
°h[Pñ[P »UQØ÷£õ ö©ß.  
öÁ[PõµzvÚõÀ uÁøíaö\õÔ, |øh Gs ÁøP Sß©®, vÚÄ, Cµzu%»®,  
JÊUS QµPo, Aì©, £[SÁõu®, £À÷|õ´, |õíÁÈø¯ z ukUQßÓ  
%zvµQª\µ[PÒ, P£õvUP®, |Ê£õ®! •u¼¯ øÁPíõÀ EshõS® |g\_, \ø{£õu®  
•u¼¯ ÷|õ´PÒ }[S® GßP.

& £uõºzu Sn£õh® & 1184

öÁ[Põµg ÷\zx©zøu ÷ÁÖ£sq ÷©PkS  
u[S]» }°•Ô¯ z uõßÁõ[S®

& öÁ[Põµ® P£zøu²®, }°°øø¯ ²® }US®.

& Sn£õh® uõx^Á ÁS"! £UP®: 327

**\_zv •øÓPÒ:**

öÁ[Põµzøu \mi°¼mk ö£õ›zx Põí°»õÁx, £Ça\õøÔ»õÁx Aøµzx  
E»ºzvö¯ kUP \_zv¯ õS®.

(÷ÁÖ)

CuøÚ QÈPmi G,ø©a\õnzøu }À PøµzxU öPõvUP øÁzx AvÀ QÈø¯ AÊzv  
Gkzx \_zu }À PÊÂ `¯ öÁ£zvÀ E»ºzua \_zv¯ õS®.

(÷ÁÖ)

öÁ[Põµzøu ^ø»°À •iøx G,ø©a \õnzvÀ ö£õvzx øÁzx 3 |õmPÒ ö\ßÓ¤ß  
\_zu}À PÊÂ E»ºzua \_zv¯ õ®.

(÷ÁÖ)

£\_Âß \õñ£õ¼À CuøÚ PÊÂ E»ºzu \zv¯ õ®.

(÷ÁÖ)

G,ø© %zvµzvÀ Cøu 3 |õÈøP FÓ øÁzx GkUP \_zv¯ õ®.



(÷ÁÖ)

CuøÚ }°ÁØÖ®£i ö£õ›zxU öPõshõÀ \_zv

(÷ÁÖ)

£Ça\ðØÔ»õÁx \õï°»õÁx ö|õa]ø»a \ðØÔ»õÁx

xøÁzx xøÁzx E»°vÚõ¾® \_zv⁻ õS®.

& Sn⁻£õh® & uõx^Á ÁS⁻! £UP® 327

•,[Pz uøÇø⁻ xøÁzx £õøÚ°¼hÄ®. 2 £i usp° Âmk ÷Ák PmhÄ®.

÷©÷» öÁ[Põµzøu⁻ ÷£õmk \mi⁻ õÀ %õhÄ®. G›UPÄ®, Aøµ |õÈøPUS ¢ÓS

GkzxU öPõÒÍÄ®.

(÷ÁÖ)

£\_Âß ÷Põª⁻ zvÀ J, |õÒ FÓ⁻÷£õmk

PØÓõøÇ Cø»°À ¢ÍS÷£õmk ÁiPmhÄ®.

& APzv⁻ ° AmhÁøñÁõPh®. £UP® 23.

**öÁ[Põµzvß £s!PÒ:**

1. öÁÒøÍ⁻ õ´ öuÍÁõ´, ]» ÷Põñ[P÷Íõk Ti⁻ uõ´ ¢ÝªÝ⁻ £õ´ C,US®.

2. PõØÖ⁻£k®£i øÁzuõÀ E⁻ªß÷©À öÁsoÓyÒ £i²®.

3. öÁ[Põµzøu⁻ ö£õÔzuõÀ Av¼,US® }° \_si ö£õ›øx AvÀ ]Ô⁻ xÁõµ[PÒ  
÷uõßÖ®.

4. }›À Pøµ²®, \õµõ⁻ zvÀ Pøµ⁻ õx.

**öÁ[Põµ øÁ⁻! •øÓPÒ:**

J, ö£›⁻ £õshzvÀ §}Ö 1 £i, usp° 8 £i ÷ºzx Pøµzx öuÍöÁkzx ^Ú® 100

£»®, öÁi²⁻! 6 1/4 £»® ÷ºzx J, £m\® `›⁻ öÁ⁻£zvÀ Põ⁻ øÁUP P,US®.

CuøÚ Ak⁻÷£ØÔ, PÒÎ \_mh \õ®£À 1 £i, SßÔ°ø»a\õÖ 1 £i, B©ñUS ö|´ 1/2

£i ÷\ºøx P©»® ÷£õÀ w %omi 4 |õÈøP G›zx Áõ⁻ PßÓ £õzvµzvÀ FØÔ J,  
£m\® öÁ°¼À øÁUP öÁ[Põµ©õS®.

& ÷£õPº 7000 & 2® £õP®

©Qø©:

64 \µUøP²® Pmk®. E£µ\® 120l²® \øuõUS®. PõµzøuUPmk®.  
Pí[S, ö\øµµ® S, CøÁPÐUS Bv⁻ õS®.

**Buõµ⁻ £Sv:**

\_zvzu öÁ[Põµ®, \_US, ºíS, v⁻ª¼ BQ⁻ ÁØøÓ \© AíÄ Gkzx ö£õizx  
øÁzx ÷uøÁ⁻ õÚ AíÄ öÁØÔø»a \øØÔÚõÀ Aøµzx SßÔ⁻ ÍÄ ©õzvøµPíõP  
E,mi øÁzxU öPõÒÍÄ®.

AíÄ & C, ©õzvøµ  
÷ÁøÍ & Põø», ©õø» C,÷ÁøÍ  
AÝ£õÚ® & öÁø}º

Buõµ ¡À & AÝ£Á øÁzv⁻ ÷uÁ CµP]⁻ ® £õP® 4 £UP® 500

## US

÷ÁÖ ö£<sup>-</sup>º: A,UPß, AuP®, BºzµP®, E£,À»®, E»ºøu Cg], Pk£zvµ®, \_US,  
\_si, ö\ösi, ö\£ßÚ®, ö\ÍÁºn®, |Á\_Ö, |öPµ®, ©ö|åu®, ÂaÁ÷£åá®, Âh %oi<sup>-</sup>  
A<sup>ao</sup>u®, ÷ÁºUöPö®\.

& Sn£öhh® & %º¼øP £UP® 470.

©PzuöÚ ÁºUPö©ßÖ µöPµövn GßÖ

©hÁöÚ Ã<sup>-</sup> ö©ßÖuØS<sup>-</sup> ÷£,

APzuöÚ ÁP|öu ö©ßÖ® ÷£,

A,Î÷Úö® Á»uö©ßÓuØS<sup>-</sup> ÷£,

ÁPzuöÚ ÁöUSPö® ö©ßÖ® ÷£,

Á\Ûø÷uö®, ©g\zu ö©ßÖ® ÷£,

|PzuöÚ |öUS ö©ßÖ® ÷£,

|ÎÚ©uö´ ö\öÀ¼Âm÷hb \_UQß ÷£÷µ.

& £g\ PöÂ<sup>-</sup> {Psk (537) £UP® 221.

Eng – Dried Ginger

Tel – Sonti

Mal – Chukku

Kan – Ona shunti

Sans – Nagaram

Hindi – Sonth

Arab & per – Znagebilarataba

£<sup>-</sup> ß£k® EÖ<sup>-</sup>! : QÇ[S (E»ºøux)

**Sn® :**

\_øÁ & Pöº<sup>-</sup>!

ußø© & öÁ<sup>-</sup>£®

α>Ä & Pöº<sup>-</sup>!

**ö\øP:**

öÁ"£•shõUQ

£]zysi

APmkÁõ´ÁPØÔ

**ö£õxUSn®:**

`ø»©øu® ö|gö\`"i ÷uõh÷©" £®©Çø»

%ø»® Cøµ"¤,©À %øUS}º & Áõ»P£

÷uõh©v lõµø öuõhºÁõu Sß©}ºz

÷uõh®B ©®÷£õUSg \_US.

& Sn£õh® %ø¼øP £UP® 470.

\_UQÚõÀ ö\`- õø© ©õºö£ªa\À, !î÷`£®, öÁ"£®, RÌÁõ´÷|õ´, Cøµ"!  
C,©À, PÈa\À, }÷µØÓ®, Sß©®, ÁºØÖ"¤\®, PõxUSzxuÀ, •P÷|õ´, uø»÷|õ´,  
Sø»Á¼, £õsk, ÁºØÖUSzxuÀ, ! \_µ® ÷£õ®.

**©,zxÁ" £" ßPÒ:**

1. \_USzyøÍ P,®! µ\zvÀ ÷ºzx Põø»º¼möPõÒÍ ÁºØöÓªa\À }[S®.
2. \_US Si}µõÀ |a\_U Põ´a\À }[S®.
3. \_USz yÎÀ %øÂµÀ AÍÄ £\_®£õ¼À öPõkUP £]²shõS®.
4. \_UøP Áõº¼mk ö©À» £À Á¼ ÷£õ®.
5. ]Ö xsk \_UøP PõvÝÒ ö\¼zu Põuøh"!i, PøÍ"!i, ! \_® }[S®.

## აქ

÷ÄÖö£°: P¼øÚ, PÔ, Põ® , ÷PõÍP®, vµ[PÀ, º À, \,©£øu®, ÁÒÎ®,  
©õ®, SÖªS, ©ø» õÍ.

& Sn£õh® %¼øP, £UP® 760.

A,möhßÖ, ©u[PB, ©ø»zv,PÀ, Amh©õõv, Pzv\ß, Pzx,£°ß, ÷|°  
ÁøÚøuõß, uõ´ GßÓ Gmk¨ö£°PÒªSUSsk.

& £g\ PõÂ´ {Psk 538.

Eng – Black pepper

Tel – Miriyalu

Mal – Kurumulaku

Kan – Menasu

Sans – Maricha

Hindi – Kali-mirch

Pers – Filfliasiah

& Sn£õh® & %¼øP £UP®.760

ÁÍ´À: Cx J,ÁøPUöPõî; Cx ©µ[Pøía \_ØÔ, HÔ Ahºzv´õ´ ÁÍ®, Cuß  
£ÇzxUSªS Gß£x ö£°. Cuß £Ç® £Êzu ÷uõÀ EøøuõÀ Ax öÁÒøÍªS  
Gß£°. B°Ý® öÁÒøÍªS CUöPõîø´\õøøuußÖ.

ÁÍ´h®: öußÛøv´õÂÀ ©ø» õÍ®, öPõa], ShS, ø©° •u¼´ ©ø»|õkPÎÀ  
£°µõQÓx.

£°ß£k® EÖ¨: Âøu

Sn®:

—øÁ & øP"!

ußø© & öÁ"£®

æ>Ä & Põ°"!

### ö\øP:

Põµ¾shõUQ	– Acrid
APmkÁõ~ PØÔ	– Carminative
•øÓöÁ"£PØÔ	– Antiperiodic
ui"lshõUQ	– Rubefacient
öÁ"£•shõUQ	– Stimulant
ÃUP[Pøµa]	– Resolvent
Áõu©hUQ	– Antivatha
a\>	– Antidote

### ÁøPPÒ:

£aø\ªÍS	– A green variety of pepper
öÁÒøÍªÍS	– White pepper
ÁõÀªÍS	– Piper cubeba

©,çx \zxUPÒ : chavicine, Piperine, Piperidine •u¼~ BÀP»õ'kPÒ EÒÍÚ.

& ©,zxÁz uõÁµÂ~ À, £UP® 184.

ö£õxSn®:

ªíSÖg\_øÁ÷¯ öußÛÀ ¢kPk ìènÃ›¯®  
£ÍPÖ »\_÷Á\_å® £°ÀPk Â£õP©õS®  
ÁõkÖ ¢zu® ÷©÷» Á°Ö©õ Â\_zv ö\²®  
ÃkÖ ©£ì©õ µg\ç {¯ õ\÷© ÂÍ[S[ Põ\®.

& £uõºzu Sn ©g\›, £UP® 146.

ªíS, Pkµé®, EènÃ›¯®, »\_ \_ñ Sn[PÒ, PkÂ£õP® CÁØøÓ Eøh¯x.

¢zuzøu AvP›US®. A£ì©µ®, \ç{¯ õ\®, Põ\® ÷£õUS®.

$$v''_{\otimes 1/4}$$

÷ÁÖ ö£⁰: B⁰Pv, Es\õµ®, E»øÁ[õ], Põ©ß, Shõ', ÷Põ»P®, ÷Põ»  
÷PõøÇ⁻ ÖUQ, \µ®, \õi, xÍÂ, ©õPv, PøÚ, öÍsi, uskÎ, P¼Û, £õ»®, ¢⁻¼,  
øÁ÷uQ, A®|, Bv©₃çx.

& Sn£õh® %<sub>00</sub>¼ØP, £UP® 514.

PõnõÁv, ÷uÁõÚv, Põo,öÁ¼Áõ, ÷ÁPõçv, ÷£õuP®

$$- \mathbb{E} g(P_{\tilde{\theta}}) \{P_{sk}$$

Eng – Long pepper

Tel – Pippilu

Mal – Thippili

Kan – Hippili

Sans – Pippali

Dvk – Pipliyan

Pers – Daraife-fil

ÁÍ-À!:: öPõí ÁøP

Áí·h®: öußÛçv- õÂ¾®, Á[PõÍzvß Rì"£õP[PI¾® CuøÚ £°·kQßÓÚ°.

**ÁØP : 2**

1.  $A \rightarrow Z \nu \bar{\nu} \frac{1}{4}$
2.  $\bar{\nu} \tilde{\phi} U Z \nu \bar{\nu} \frac{1}{4}$

£- β£k® EÖ": Põ', A>]

**Sn®: (E»<sup>0</sup>ϕux)**

\_ØÁ & Põµ®

ußø© &amp; öÁ"£®

ᄀᆫᆯᆡ & CŬᆮᆺ!

**ö\øP:**



öÁ"£•shõUQ – Stimulant  
 APmkÁõ¯ PØÔ – Carminative

### ö£õxUSn®:

A›]çv" ¢¼°ÚõØÓ »ØÓPk »SÁõ® ìÁõx  
 £µ\_Ö »÷Á ì{Uu® £°À^u® ©xµ£õP®  
 ©ØÖ÷©õ° aÁõé \õÁ©,Á¯ ñ¯ •® ÷£õUS  
 •ØÔk® Æ,è¯ ©õUS •¯°µéõ ¯Ú•gö\²®

v"¢¼US \_Áõ\®, Põ\®, ñ¯® ÷£õS®.

### öÁØÔø»

÷ÁÖ ö£¯°: uõ®§»®, uõ®§»ÁÀ¼, vøµ¯ À, |õPÁÀ¼, ö©À¼ø», öÁØÔø»,  
 ö©À»hS.

Eng – Betal leaf  
 Tel – Tamalapaku  
 Mal – Vetilla  
 Kan – Viayadele  
 Sans – Nagavalli  
 Hindi – Pan.

Áíh®: Cçv¯ õÂÀ öÁ"£ £õPzv¾®, \x"lÓÍ Ch[PîÀ £°ö\´¯£k®  
 ©µ÷©Ö[öPõi.

ÁøP 3: 1. öÁØÔø» & ©n•®, Põµ•® CÀ»õuøÁ  
 2. P®©õÖöÁØÔø» & ©n•®, Põµ©® ¢Sçux  
 3. PØ§µ öÁØÔø» & ©Ú•®, ]Ö Põµ•Òíx.

£¯ ß£k® EÖ"': Cø»

**Sn®:**

\_øÁ & ÂÖÂÖ"! , Põ°!

ußø©& öÁ"£®

¤»Ä & Põ°!

**ö£õxUSn®:**

""I"® AÖ[Põß Auß\õµ[ öPõshUPõØ

ø£¯ a \°zv¯ ®÷£õ® ø£øö|õi÷¯ !"

öÁØÔø»°ß µ\zøu" £,QÀ I"®, \°zv¯ ® ÷£õS®.

## öÁ[Põµ® ÷\,® \_Áõ\Põ\zvØPõÚ ©,çxPÒ

1. \_Áõ\Põ\® wµUQ⁻ õÇ®  
Buõµ ¡À & ußÁçv› øÁzv⁻ US®ª 300. £UP® 46
2. C,©¾⁄⁄US ÷»Q⁻®  
AÍÄ : ö|À¼UPõ⁻ ÍÄ  
Buõµ ¡À : ußÁçv› øÁzv⁻ US®ª 200. £UP® 102
3. Áõø» ]çuo©o ©õzvøµ  
AÝ£õÚ® : Cg]\õÖ, \_US }º  
Buõµ ¡À : EºPõUS® ]zu ©,zxÁ®. £UP® 556
4. PUSÁõß ©õzvøµ  
AÝ£õÚ® : ÷uß  
Buõµ ¡À : AÝ÷£õP øÁzv⁻ ÷uÁ µP]⁻®. £UP® 305
5. ÷Põhõ\_È ©õzvøµ  
AÝ£õÚ® : ÷uß, öÁç}º  
Buõµ ¡À : APzv⁻ ° AmhÁøñ ÁõPh®. £UP® 200
6. öÁ[Põµ ¢ÍS `µn®  
AÝ£õÚ® : ÷uß  
Buõµ ¡À : Sn£õh® uõx^Á ÁS"!. £UP® 330
7. öÁ[Põµ£Ø£®  
AÝ£õÚ® : ÷uß  
Buõµ ¡À : AÝ÷£õP øÁzv⁻ |Á}u®. £UP® 23
8. PÄ› ]çuo©o ö\çym®  
AÍÄ : 1 SßÔ©o  
AÝ£õÚ® : v›PkS yÒ, ÷uß  
Buõµ ¡À : ]zu øÁzv⁻ z vµmk, £UP® 151
9. Á\çu S\_©õPµ ©õzvøµ  
AÍÄ : £ºÓÍÄ  
AÝ£õÚ® : Cg]\õÖ

- Buõµ ¡À : ]zu øÁzv<sup>-</sup> z vµmk. £UP® 42
10. ÁÀ»õøµ ö|´  
AÍÄ : ö£õmkUPµsi<sup>-</sup> ÍÄ  
Buõµ¡À : ]zu øÁzv<sup>-</sup> z vµmk. £UP® 254
11. Áõø» ]øuõ©o ©õznøµ  
AÍÄ : £°ÓÍÄ  
AÝ£õÚ® : ÷uß (A) Cg]aõÖ  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 73
12. ]ÁÚõ° A<sup>ao</sup>u®  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 166
13. BÖ•Pa ö\øγµ®  
AÍÄ & £nöÁøh  
AÝ£õÚ® & v›PkS yÒ, ÷uß  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 138
14. w£õQÛ `µn®  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 214
15. \g^Â ©õznøµ  
AÍÄ & SßÔ<sup>-</sup> ÍÄ  
AÝ£õÚ® & öÁÒÍõmk" £õÀ  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 21
16. £õ»\g^Â ©õznøµ  
AÍÄ & £õ]ˆ£ˆ ÔÀ £õv  
AÝ£õÚ® & ÷Põ÷µõ\øÚ  
]zu øÁzv<sup>-</sup> z vµmk. £UP® 32
17. á÷»õuõˆ ©o  
AÍÄ & C»øøu Âøµ<sup>-</sup> ÍÄ  
AÝ£õÚ® & ÷uß, £õÀ
18. µåõ©o ©õznøµ  
AÍÄ & SßÔ<sup>-</sup> ÍÄ

- AÝ£õÚ® & ]zvµzøu (A) Cg]a\õÖ (A) uõ´´£õÀ  
 AÝ÷£õP øÁzv⁻ ¢µ®© µP]⁻ ®. £õP® 2 £UP® 81.
19. ÷PõøÇ C,©\US  
 AÍÄ & 1 ÷uõ»õ  
 AÝ÷£õP øÁzv⁻ ¢µ®©µP]⁻ ®. £UP® 69.
20. öÁ[Põµ £Ø£®  
 AÍÄ & SßÔ Gøh  
 AÝ£õÚ® & \©⁻ zvØ÷PØ£  
 ]Qa\õµw£® & £UP® 227
21. C,©¾US `µn®  
 AÝ£õÚ® & ÷uß  
 ÷uøµ⁻º øÁzv⁻ PõÂ⁻ ® 1500. £UP® 155
22. \_Áõ\S÷hõ› `µn®  
 AÍÄ & v›Pi⁻ ¢µ©õn®  
 AÝ£õÚ® & ÷uß Cg]a\õÖ, ö|´  
 Psqalõª £µ®£øµ øÁzv⁻ ®. £UP® 109
23. C,©À, Cøµ⁻ ¢ØS⁻ ö£õi  
 AÍÄ & öÁ,Pi⁻ ÍÄ  
 AÝ£õÚ® & ÷uß, Cg]  
 \µ÷£øvµº øÁzv⁻ •øÓPÒ (Põ\, \_Áõ\ ]Qaø\ )
24. C,©À, Cøµ⁻ ¢ØS Si}º  
 |õÒ & 3 |õÒ Põø» ©mk®  
 \µ÷£øvµº øÁzv⁻ •øÓPÒ (Põ\ \_Áõ\ ]Qaø\ )
25. ¼[P ©õzvøµ  
 AÍÄ& SßÔ⁻ ÍÄ  
 AÝ£õÚ® & öÁø}º  
 Psqalõª £µ®£øµ øÁzv⁻ ®. £UP® 164
26. \_Áõ\Põ\ SÎøP  
 AÍÄ: £ºÓÍÄ

ΑΥΞΟÚ® : ÷uß, ö|', \ºUPøµ  
÷uøµ<sup>-º</sup> øÁzv<sup>-</sup> ® & 1000. £UP® 239.

27. BÚøµ µ\®

ΑΪÄ & SßÔ<sup>-</sup> ΪÄ

ΑΥΞΟÚ® & Cg]a\öÖ

\µ÷£øνµº øÁzv<sup>-</sup> •øÓPÒ (Pö\, \_Áö\ Q]aø\)

28. Cøµ"l, ö|g\_ PmkUS \_US PÀP® ©,øx

ΑΪÄ & SßÔ<sup>-</sup> ΪÄ

ΑΥΞΟÚ® & Cíg`kΟΪ öÁø}º

\µ÷£øνµº øÁzv<sup>-</sup> •øÓPÒ (\_Áö\ Pö\ ]Qaø\)

29. ÷PöøÇ C,©\US

ΑΪÄ & 1/4 £»®

ΑΥΞΟÚ® & ÷uß

÷|ö´PÐUS ]zu"£›Pöµ® (•uÀ £öP®) £UP®.142

30. yxÁøΪ ö|´

ΑΪÄ & 1 ¼ 1 ¼ ÁµöPöÚøh

ΑΥΞΟÚ® & \ºUPøµ, ÷uß

ΑΥ÷£öP øÁzv<sup>-</sup> |Á}u® 8® £öP®. £UP® 55

31. Aª,uönÁ µ\®

ΑΥΞÁ øÁzv<sup>-</sup> ÷uÁ µP]® £öP®.4. £UP® 496

32. \_Áö\Shöµ µ\®

ΑΥΞÁ øÁzv<sup>-</sup> ÷uÁµP]® £ö®. 4. £UP® 496

33. ν›÷»öP`hö©o ©özvøµ

ΑΪÄ : SßÔ<sup>-</sup> ΪÄ

ΑΥΞΟÚ® : xÍ] \_µ\®, ]ØÓµzøu Si}º.

**திரிகடுகு சேரும் சுவாசத்திற்கான மருந்துகள் சில:**

1. கலிங்காதி லேகியம் - அனுபவ வைத்திய தேவரகசியம் ப - 497
2. மணிமந்திராதி சூரணம் - அகத்தியர் வைத்திய சிந்தாமணி -  
4000 ப - 192
3. ராமபாணக்குளிகை - உயிர்காக்கும் சித்த மருத்துவம் ப - 557
4. லவங்காதி மாத்திரை - அனுபவ வைத்திய தேவ ரகசியம் ப - 500
5. திப்பிலியாதி சூரணம் - அகத்தியர் வைத்திய சிந்தாமணி 4000 ப - 187
6. சுவாச குடோரி மாத்திரை - சித்த வைத்திய திரட்டு ப - 96
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13. அக்கினிச் சூரணம் - அனுபவ வைத்திய பிரம்ம ரகசியம் ப - 105
14. ஸ்ரீ பஞ்ச காவிய மாத்திரை - உயிர்காக்கும் சித்த மருத்துவம் ப - 557

வெங்காரம்



சுத்தித்த வெங்காரம்





சுக்கு



மிளகு



திப்பிலி



## **MATERIALS AND METHODS**

In this dissertation the Thirikadugu Mathirai was taken as a compound drug study. This drug was prepared as per to specification given in the Anuboga Vaithiya Deva Ragasiyam Vol. 4 Page 500.

### **Collection of the test drug:**

The raw drugs Venkaram, Chukku, Milagu, Thippili were collected from the Pharmacy Raw drug store, Govt. Siddha Medical College, Palayamkottai.

### **Purification of the test drug:**

Venkaram was fried in an Agal, till all the water content evaporates.

Outer skin of the chukka was removed.

Milagu and Thippili were roasted.

### **Preparation of the test drug:**

Purified Venkaram, Chukku, Milagu, Thippili were taken in equal quantities, placed in Kalvam and powdered well. Then it was sieved through a fine cotton cloth. (Vastharakayam)

The fine powder was placed in Kalvam, rubbed with Vetrilai juice and rolled into pills (Mathirai) of Two Kundri size. (260 mgs)

**Route of Administration:** Entral

**Dose :** 260 mg Bi a day with hot water.

The Mathirai prepared was subjected to,

– Bio Chemical Analysis

- Pharmacological Analysis
- Antibacterial Analysis
- Clinical Assessment.

திரிகடுகு மாத்திரை



# BIO CHEMICAL ANALYSIS OF THIRIKADUGU MATHIRAI

## Preparation of the extract

100 mgs. of Mathirai is weighed accurately and placed into a clean beaker and added a few drops of conc. Hydrochloric acid and evaporated it well. After evaporation cooled the content and added a few drops of conc. Citric acid and evaporated it well. After cooling the content add 20 ml. Of distilled water mix well filter it. Then it is taken for analysis.

## Qualitative Analysis

Sl. No.	Experiment	Observation	Inference
1.	<b>Test of Calcium</b> 2 ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% Ammonium oxalate solution is added.	No White precipitate is formed.	Absence of calcium.
2.	<b>Test of Sulphate</b> 2 ml of the extract is added to 5% barium Chloride solution.	No white precipitate is formed.	Absence of sulphate.
3.	<b>Test of Chloride</b> The extract is treated with silver nitrate solution.	No white precipitate is formed.	Absence of chloride.
4.	<b>Test of Carbonate</b> The substance is treated with concentrated Hydrochloric Acid.	No break effervescence is formed.	Absence of Carbonate.
5.	<b>Test for Starch</b> The extract is added with Potassium Ferro cyanide.	Blue colour is formed.	Indicates the <b>presence</b> of starch.
6.	<b>Test for Iron</b> <b>Ferric:</b> The extract is treated with glacial acid and Potassium Ferro Cyanide	No Blue colour is formed.	Absent of ferric iron.
7.	<b>Test for Ferrous Iron:</b> The extract is treated with concentrated	Blood red colour is formed.	Indicates

	Nitric acid and ammonium thio cyanide.		trace amount of ferrous Iron is <b>present</b> .
8.	<b>Test for Phosphate</b> The extract is treated with Ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed.	Absence of phosphate.
9.	<b>Test for Albumin</b> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin.
10.	<b>Test for Tannic Acid</b> The extract is treated with ferric chloride.	No blue black precipitate is formed.	Absence of Tannic acid.
11.	<b>Test for Unsaturation</b> Potassium Permanganate solution is added to the extract.	It gets decolourised.	Indicates the <b>presence</b> of unsaturated compound.
12.	<b>Test for reducing Sugar</b> 5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8 – 10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of reducing sugar.
13.	<b>Test of Amino Acid</b> One or two drops of the extract is placed on a filter paper and dried it well, after drying 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed.	Indicates the <b>presence</b> of Amino acid.

### **Inference**

The given sample of drug Thirukadugu Mathirai contains Starch, Ferrous Iron, Amino acids and unsaturated compound.

# **PHARMACOLOGICAL ANALYSIS**

## **ANTI-SPASMODIC EFFECT OF THIRIKADUGU MATHIRAI ON ISOLATED RABBIT ILEUM**

### **Aim:**

To find out the anti-spasmodic effect of Thirukaduga Mathirai isolated Rabbit ileum.

### **Preparation of the Test Drug**

400 mg of Thirikadugu Mathirai was dissolved in 10 ml of water. 1 ml of this solution contains 40 mg of drug.

### **Solutions Required**

Acetyl – Choline – 10 mg/ml, Homatropine 10 mg/ml

Test Drug (Thirikadigu Mathirai) 40 mg/ ml

### **Nutrient Solution**

Tyrode – 1 to 2 litres

### **Tissue Used**

Rabbit ileum

### **Apparatus Required**

Student's Organ bath, Sherrington rotating drum.

### **Procedure**

A rabbit was starved for 48 hours and was allowed water ad-libitum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileo-caecal junction was found out. A small piece

of ileal portin was cut, removed and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3 cms length segment was cut from this part of ileum and was tied with thread on both ends without closing of lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained 37°C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Acetyl-choline. 0.2 ml (10mg/ml) of Acetyl-choline was added and allowed to run the drum for 30 seconds. Thus the tissue was standardized and then the drum was stopped and the Acetyl-choline was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10 mg/ml) Acetyl choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Acetyl-choline solution and test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of Acetyl-choline. The drum was allowed to run for 30 seconds. The response was recorded.

Then 0.2 ml of Homatropine and 0.2 ml of Acetyl-choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph

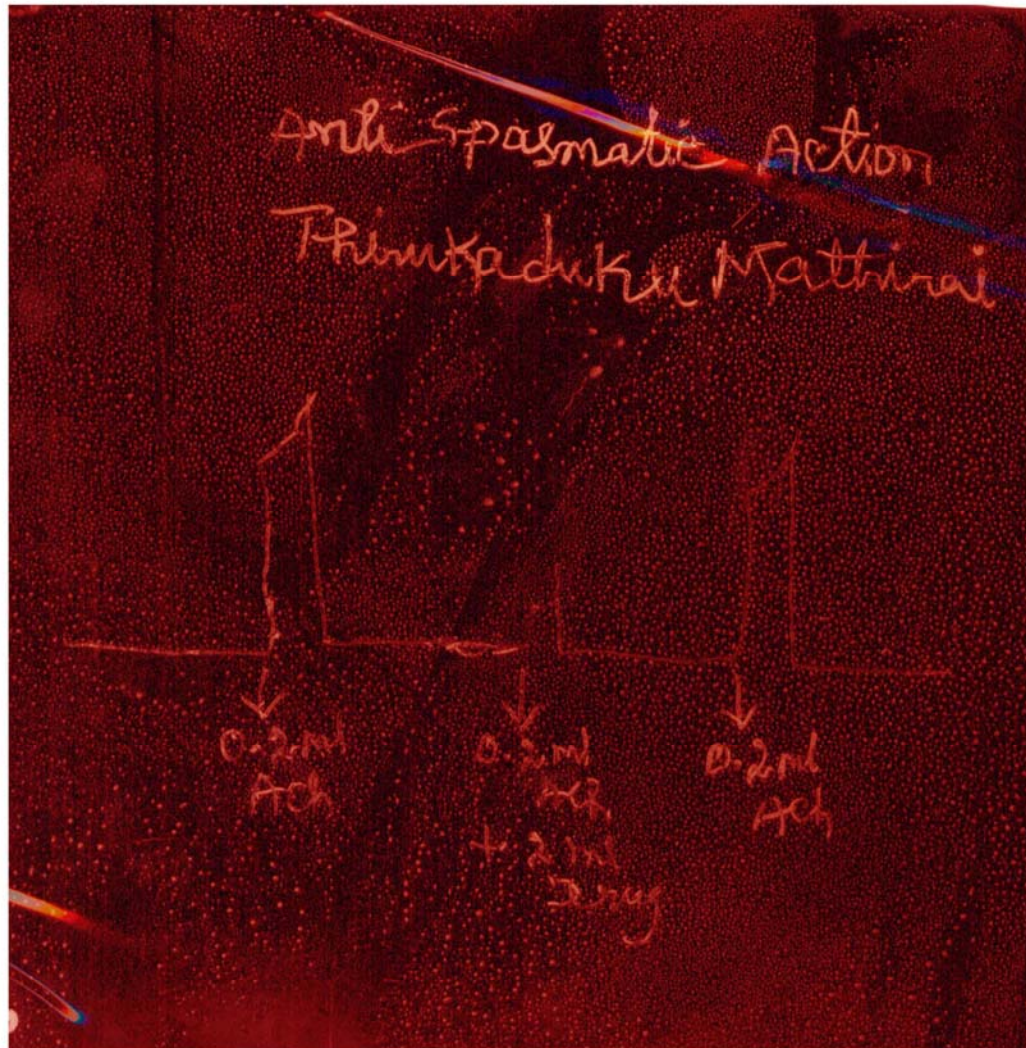


and it seems to be a baseline. Then 0.2 ml of Acetylcholine was added to standardise the tissue. Then the tracing was labeled and fixed.

### **Inference**

From the graph it is inferred that the last drug antagonise the effect of Acetylcholine when added together. So the drug has got **significant and anti-spasmodic effect**.

# Anti Spasmodic Action Thirikaduku Mathirai



# **ANTI-HISTAMINE STUDY OF THIRIKADUGU MATHIRAI ON ISOLATED GUINEA PIG ILEUM.**

## **AIM**

To study the anti-histamine effect of Thirikadugu Mathirai on isolated Guinea Pig ileum.

## **PREPARATION OF THE TEST DRUG**

250 mg of Thirikadugu Mathirai was dissolved in 10 ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

## **SOLUTIONS REQUIRED**

Histamine-1 in 100,000 strength, Anti-histamine (Pheniramine maleate 22.75 mg/ml)

Test drug Thirikadugu Mathirai – 25 mg/ml.

## **NUTRIENT SOLUTION**

Tyrode – 1 to 2 litres

## **TISSUE USED**

Guinea Pig ileum

## **APPARATUS REQUIRED**

Student's organ bath, Sherrington rotating drum.

## **PROCEDURE**

An overnight fasted Guinea Pig weighing about 400 gms was sacrificed by a blow on the head and by carotid bleeding. The abdomen was suddenly opened and ileo caecal junction was found out. A small piece of ileal portion

was cut and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3 cms length segment was cut from this part of ileum, and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37°C and bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Histamine. 0.2 ml (10mg/ml) of Histamine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Histamine was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10 mg/ml) Histamine was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Histamine solution and test drug solutions were washed out. Then the above experiment was done for 0.2 ml dose of Histamine. The drum was allowed to run for 30 seconds. The response was recorded.

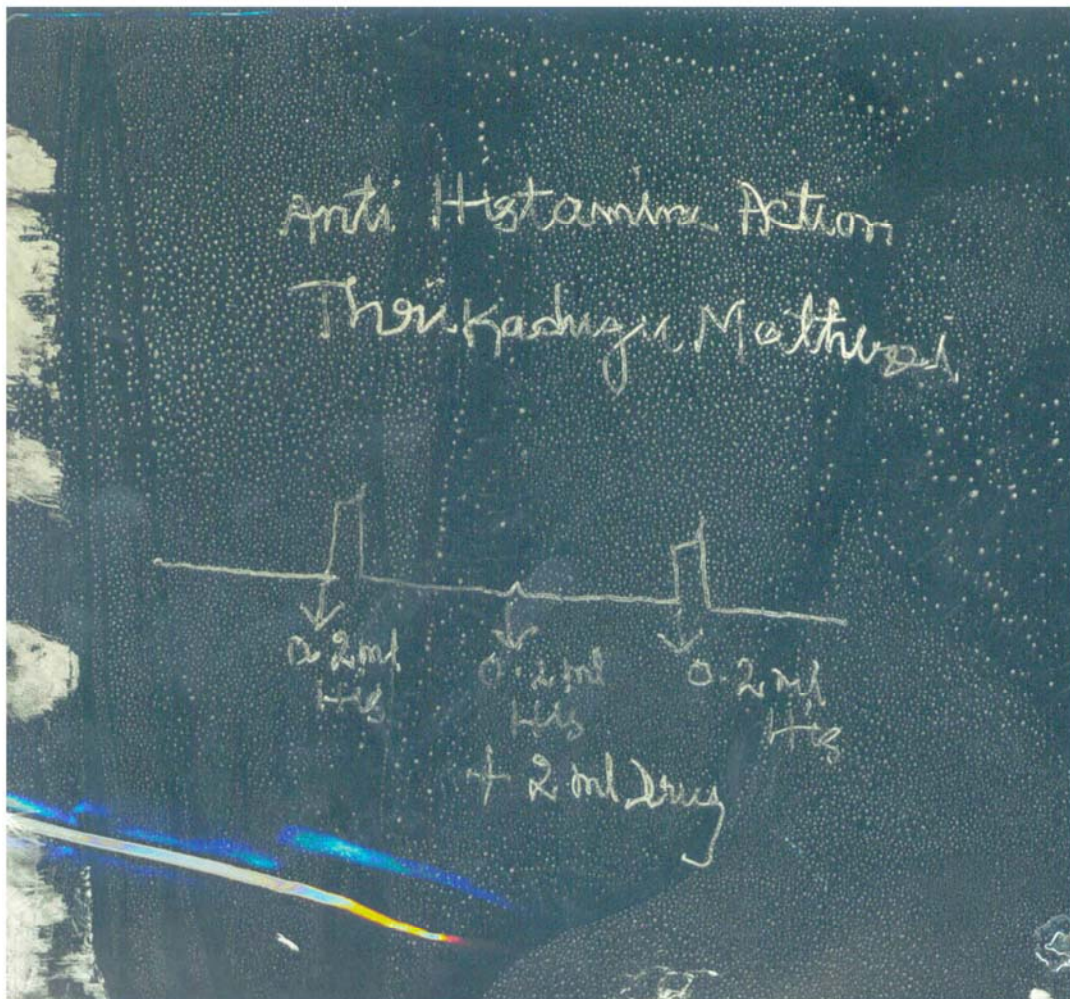
Then 0.2 ml of Anti-histamine and 0.2ml of Histamine was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph and

it seems to be a baseline. Then 0.2 ml of Histamine was added to standardise the tissue. Then the tracing was labelled and fixed.

### **INFERENCE :**

From the graph it is inferred that the test drug antagonise the effect of Histamine when added together. So the drug has got **significant anti-histamine activity**.

Anti Histamin Action  
Thirikaduku Mathirai



# **ANTI – BACTERIAL ACTIVITY OF THIRIKADUGU MATHIRAI**

## **TESTING FOR THIRIKADUGU MATHIRAI DISC SENSITIVITY BY KIRBY BAUER METHOD.**

The sensitivity of the disc is determined by Kirby Bayer Disc Diffusion method.

### **AIM**

To determine the Antimicrobial activity of an antibiotic against the test organism.

### **PRINCIPLE**

The principle of antibiotic sensitivity test are simple, disc saturated with known concentration of antibiotic is placed on agar plates that has been inoculated with the test organism. The disc pick up the moisture and the antibiotic diffuses radially outward through the agar producing an antibiotic concentration. Gradient effectiveness of susceptibility is proportional to the diameter of the inhibitory zone around the disc. organism which grows upto the edge of the disc are resistant.

The recommended medium in this method is Muller Hinton Agar its PH should be between 7.2 – 7.4 and should be poured to uniform thickness of 4mm in the petriplate (25ml) for certain fastidious microorganism.

## METHODOLOGY

- ❖ Muller Hinton Agar plates are prepared and *Pseudomonas*, *Vibrio cholerae*, *E.coli*, *Bacillus*, *Klebsiella*, *Micrococcus*, *Streptococcus* is swabbed separately.
- ❖ The prepared discs of antibiotics Thirikadugu Mathirai are placed over the incubated plate using sterile forceps and incubated for 24 hours at 37° Celsius.
- ❖ The plates after 24hours incubation are observed for zone of inhibition.

## RESULT

The diameter of zone of inhibition Thirikadugu Mathirai on  
*Strepto coccus pneumoniae* 1.3mm

## KIRBY BAUER ANTIMICROBIAL SUSCEPTIBILITY METHOD

### RESULT TABLE

S.No.	Antibiotic	Gram Negative Organism (culture)	Zone Size (mm)	Susceptibility	
				Sensitivity	Resistance
1	Thirikadugu Mathirai	<i>Pseudomonas aeruginosa</i>	0.7mm	+	-



## CLINICAL ASSESSMENT

A clinical trial was done on 35 cases of different age and both sex. They were clinically diagnosed as Eraippu Erumal, according to our siddha literatures. Among them 30 patients were treated as out patient and 5 patients were treated as in PG Department of GUNAPADAM, Government Siddha Medical College Hospital, Palayamkottai.

Patients were thoroughly examined and enquired and all the clinical features complete history, hygienic conditions, surroundings, occupations were noted. Personal habit, previous illness, dietary details and allergens to specific things were recorded.

They were of different severity of signs and symptoms like difficulty in breathing, cough with expectoration, tightness of chest and sometimes having other upper respiratory tract disease symptoms. The duration of illness was also variable. They had different etiology.

The routine blood investigations were done in each case, sputum for AFB, Radiological investigations also carried out. Radiological investigations were mainly used to rule out other causes and diseases.

The cases were screened as per the following criteria's and selected from the outpatient and inpatient department of the GSMCH Palayamkottai.

### **Eraippu Erumal-Including Criteria**

- Cough, Nocturnal cough, Paroxysm of cough.

- Difficulty in breathing.
- Expectoration.
- Sputum color and quantity without gross abnormalities such as blood stain sputum, abnormally large quantity of sputum.
- History of Allergic Substances.
- Sneezing.
- Allergic Rhinitis
- Differential count-especially Eosinophil.
- Respiratory system examination added sounds-Rhonchi.
- Radiological investigation-Normal study, Bronchitis, chronic Bronchitis.

### **Eraippu Erumal-Excluding Criteria**

- Facial puffiness
- Abdominal distension
- Pedal oedema
- Hepatomegaly
- Paroxysmal Nocturnal dyspnoea
- Orthopnoea
- Evening raise of temperature.
- Sputum for AFB positive
- Albuminuria
- Increased blood urea and serum creatinine

- Status Asthmaticus
- High fever with raised ESR

### **Line of treatment**

The drug Thirikadugu mathirai was administered internally in dose of 260mg two times a day with hot water after diet to each case for two six weeks or above according to severity of symptoms.

### **Diet and advice for Eraippu Erumal**

- In take of hot water and hot foods.
- Avoid chill weather.
- Avoidance of factors which cause digestive disturbances.
- Avoidance of allergic factors.
- Avoidance of smoking.
- Taking bath strictly in hot water.
- Advised to take dinner before 8 p.m.
- Avoidance of stress.
- Advised to practice pranayamam and yogasanam regularly.

### **Observation**

The results were assessed on the basis of symptomatic relief obtained by the patient and clinically by daily examination of in-patient department and subsequent visits in out-patient department.

Out of 30 cases 14 cases were male and remaining 6 cases were female patients. 8 patients had evidence of this particular disease in their family, 4 cases had history of allergy. Almost all the patients were labours and farmers of poor socio-economic status. Among the male patients most of them were chronic smokers.

During the treatment, the cases are thoroughly interrogated and examined regularly. The clinical improvements were recorded for every 3 days for in-patients. The clinical investigations were done for the patients before and after the treatment and the prognosis was noted.

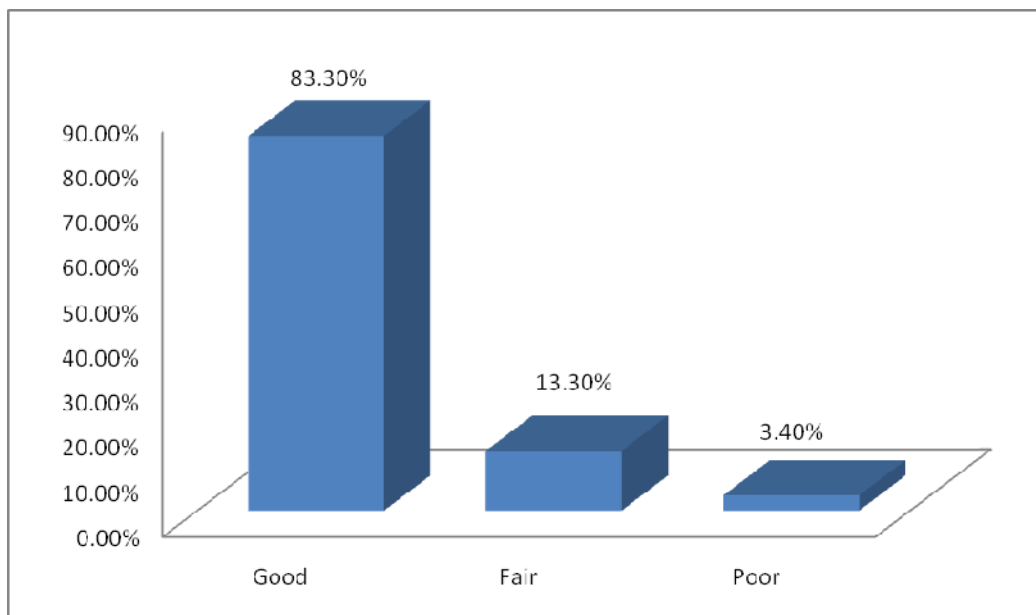
### **Result**

Among 30 cases 25 cases (83.3%) showed good response, 4 cases 13.3% show fair response and 1 case (3.4%) showed poor response.

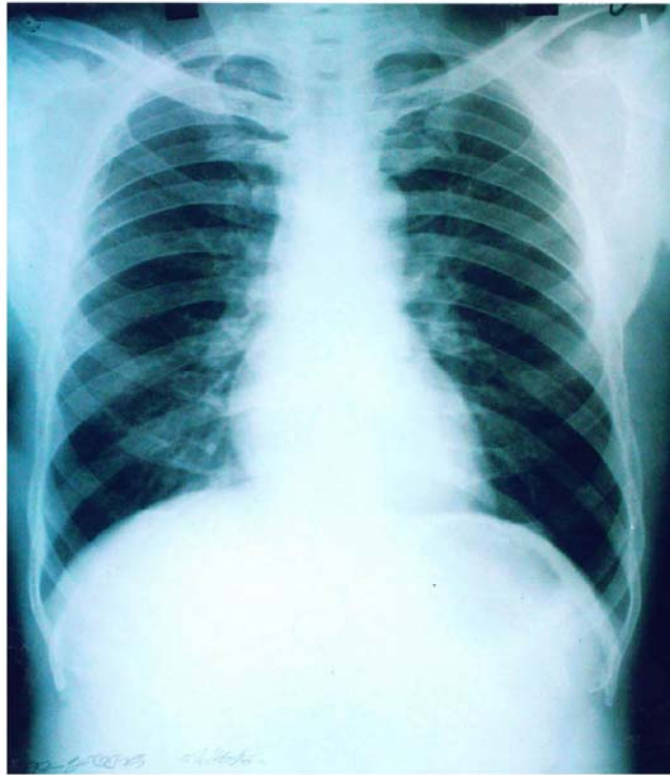
**Table Illustrating the improvement and their percentages**

S.No.	Result	No.of Patient	Percentage
1.	Good	25	83.3%
2.	Fair	4	13.3%
3.	Poor	1	3.4%
	<b>Total</b>	<b>30</b>	<b>100%</b>

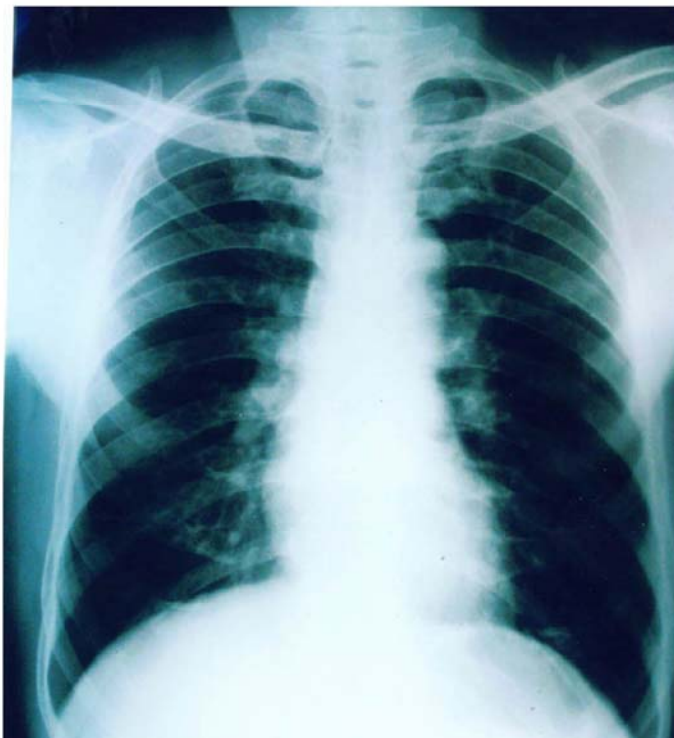
## CHART ILLUSTRATING THE IMPROVEMENT AND THEIR PRECENTAGES



Before Treatment  
Bakiyaraj M/59 I.P.No : 1022



After Treatment  
Bakiyaraj M/59 I.P.No : 1022



# OUT-PATIENTS

1.NAME : Thagasami		AGE: 84	SEX:Male	I.P.No: 9666	NO.OF DAYS TREATED: 45	FROM: 12/5/05	TO: 22/6/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: cooli		
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 6 years	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION				
			BEFORE TREATMENT		AFTER TREATMENT		
	Cough -P		Cough -A		BLOOD		BLOOD
					TC : 8300 cells/cum		TC : 8300 cells/cum
					DC : P: 59% L: 34% E: 7 %		DC : P:59 % L: 34% E: 7 %
					ESR : ½hr :11mm 1hr :22 mm		ESR : ½hr : 11mm 1hr :22 mm
					Hb : 70 %		Hb : 70 %
Sputum -W		Sputum -W		Bl.Sugar (R) :170 mgs%		Bl.Sugar (R) :170 mgs%	
				Bl.Urea :22 mgs%		Bl.Urea :22 mgs%	
				Serum Cholestrol:210 mgs%		Serum Cholestrol:210 mgs%	
Breathlessness -P		Breathlessness -P		URINE		URINE	
				Albumin :Nil		Albumin :Nil	
				Sugar :Nil		Sugar :Nil	
				Deposits :1-2 pus cells		Deposits :NAD	
Rhonchi -P		Rhonchi -A		CHEST X-RAY :Chronic bronchitis		CHEST X-RAY :Normal study	
				SPUTUM FOR AFB :Negative			
Respiratory Rate:25		Respiratory Rate:20		MANTOUX :Negative		RESPONSE:Poor	
2.NAME : S.Arumugam		AGE: 50	SEX:Male	I.P.No:29687	NO.OF DAYS TREATED: 43	FROM: 12/5/05	TO: 20/6/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: Beedi Worker		
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 6 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION				
			BEFORE TREATMENT		AFTER TREATMENT		
	Cough -P		Cough -A		BLOOD		BLOOD
					TC : 9000 cells/cum		TC : 9000 cells/cum
					DC : P:60 % L: 34 % E:4 %		DC : P: 61 % L: 35 % E: 2 %
					ESR : ½hr : 10 mm 1hr :20 mm		ESR : ½hr : 9 mm 1hr :19 mm
					Hb : 68 %		Hb : 69 %
Sputum -W		Sputum -A		Bl.Sugar (R) :140 mgs%		Bl.Sugar (R) :140 mgs%	
				Bl.Urea :22 mgs%		Bl.Urea :22 mgs%	
				Serum Cholestrol:210 mgs%		Serum Cholestrol:210 mgs%	
Breathlessness -P		Breathlessness -A		URINE		URINE	
				Albumin :Nil		Albumin :Nil	
				Sugar :Nil		Sugar :Nil	
				Deposits :3-5 pus cells		Deposits :NAD	
Rhonchi -P		Rhonchi -A		CHEST X-RAY :bronchitis		CHEST X-RAY :Normal study	
				SPUTUM FOR AFB :Negative		RESPONSE:Good	
Respiratory Rate:24		Respiratory Rate:18		MANTOUX :Negative			

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

3.NAME :Pandidavar		AGE: 60	SEX: Male	I.P.No: 29910	NO.OF DAYS TREATED: 45	FROM: 12/5/05	TO: 22/6/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: cooli			
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing sneezing since 7 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough -P	Cough -A	<b>BLOOD</b> TC : 8500 cells/cum DC : P: 60% L: 35% E:5 % ESR : ½hr :8mm 1hr :16 mm Hb : 80 % Bl.Sugar (R) :150 mgs% Bl.Urea :30 mgs% Serum Cholestrol:250 mgs%		<b>BLOOD</b> TC : 8600 cells/cum DC : P:61 % L: 36% E: 3 % ESR : ½hr : 7mm 1hr :14 mm Hb : 80 % Bl.Sugar (R) :150 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%		
	Sputum -	Sputum -W	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study		
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:24	Respiratory Rate:18			<b>RESPONSE:Good</b>		
4.NAME : Kannan		AGE: 50	SEX: Male	I.P.No: 30907	NO.OF DAYS TREATED: 35	FROM: 21/5/05	TO: 25/6/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Cooli			
<b>Complaints &amp; Duration</b> Sneezing wheezing Cough with expectoration breathlessness since 4 years	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough -P	Cough -A	<b>BLOOD</b> TC : 11800 cells/cum DC : P: 78 % L: 17 % E: 5 % ESR : ½hr : 10 mm 1hr :20 mm Hb : 77 % Bl.Sugar (R) :130 mgs% Bl.Urea :25 mgs% Serum Cholestrol:200 mgs%		<b>BLOOD</b> TC :11800 cells/cum DC : P: 78 % L: 18 % E: 4 % ESR : ½hr : 8 mm 1hr : 16 mm Hb : 77 % Bl.Sugar (R) :130 mgs% Bl.Urea :24 mgs% Serum Cholestrol:190 mgs%		
	Sputum -W	Sputum -W	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :3-5 pus cells CHEST X-RAY :chronic bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study		
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -P					
	Respiratory Rate:22	Respiratory Rate:20			<b>RESPONSE:Fair</b>		

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms



# OUT-PATIENTS

5.NAME : Kobalsami		AGE: 45	SEX:Male	I.P.No:31653	NO.OF DAYS TREATED: 39	FROM: 24/5/05	TO: 1/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: cooli				
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 4 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
			BEFORE TREATMENT		AFTER TREATMENT			
	Cough -P		Cough -A		BLOOD		BLOOD	
					TC : 8600 cells/cum		TC : 8300 cells/cum	
					DC : P: 60% L: 35% E: 5 %		DC : P:62 % L: 34% E: 4 %	
					ESR : ½hr :11mm 1hr :22 mm		ESR : ½hr : 11mm 1hr :22 mm	
					Hb : 70 %		Hb : 70 %	
Sputum -W		Sputum -A		Bl.Sugar (R) :170 mgs%		Bl.Sugar (R) :170 mgs%		
				Bl.Urea :22 mgs%		Bl.Urea :22 mgs%		
				Serum Cholestrol:210 mgs%		Serum Cholestrol:210 mgs%		
Breathlessness -P		Breathlessness -A		URINE		URINE		
				Albumin :Nil		Albumin :Nil		
				Sugar :Nil		Sugar :Nil		
				Deposits :1-2 pus cells		Deposits :NAD		
Rhonchi -P		Rhonchi -A		CHEST X-RAY		CHEST X-RAY		
				SPUTUM FOR AFB :Negative		:Normal study		
Respiratory Rate:25		Respiratory Rate:20		MANTOUX		:Negative		
				RESPONSE:Good				
6.NAME : Annamalai		AGE:41	SEX:Male	I.P.No:32067	NO.OF DAYS TREATED: 42	FROM: 26/5/05	TO: 4/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker				
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 8 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
			BEFORE TREATMENT		AFTER TREATMENT			
	Cough -P		Cough -A		BLOOD		BLOOD	
					TC : 8600 cells/cum		TC : 8600 cells/cum	
					DC : P: 64 % L: 32 % E:4 %		DC : P: 65 % L:32 % E: 3 %	
					ESR : ½hr :12 mm 1hr :24mm		ESR : ½hr : 10 mm 1hr :20 mm	
					Hb : 71 %		Hb :71 %	
Sputum -W		Sputum -A		Bl.Sugar (R) :150 mgs%		Bl.Sugar (R) :150 mgs%		
				Bl.Urea :21 mgs%		Bl.Urea :21 mgs%		
				Serum Cholestrol:225 mgs%		Serum Cholestrol:225 mgs%		
Breathlessness -P		Breathlessness -A		URINE		URINE		
				Albumin :Nil		Albumin :Nil		
				Sugar :Nil		Sugar :Nil		
				Deposits :3-5 pus cells		Deposits :NAD		
Rhonchi -P		Rhonchi -A		CHEST X-RAY		CHEST X-RAY		
				SPUTUM FOR AFB :Negative		:Normal study		
Respiratory Rate:23		Respiratory Rate:18		MANTOUX		:Negative		
				RESPONSE:Good				

P : Present W : Whitish  
R : Reduced Y : Yellowish  
A : Absent

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

7. NAME : Meena		AGE: 53	SEX:Female	I.P.No:32098	NO.OF DAYS TREATED: 34	FROM: 26/5/05	TO: 28/6/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi worker			
<b>Complaints &amp; Duration</b> Wheezing            Sneezing Cough with expectoration breathlessness since 1 year	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    : 8300            cells/cum DC    : P: 59% L: 34% E: 7 % ESR   : ½hr :11mm    1hr :22 mm Hb    : 70            % Bl.Sugar (R)            :170            mgs% Bl.Urea                :22            mgs% Serum Cholestrol:210            mgs%		<b>BLOOD</b> TC    : 8300            cells/cum DC    : P:59 % L: 34% E: 7 % ESR   : ½hr : 11mm    1hr :22 mm Hb    : 70            % Bl.Sugar (R)            :170            mgs% Bl.Urea                :22            mgs% Serum Cholestrol:210            mgs%		
	Sputum                    -W	Sputum                    -W	<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :1-2 pus cells CHEST X-RAY                :Bronchits SPUTUM FOR AFB            :Negative MANTOUX                    :Negative		<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :NAD CHEST X-RAY                :Normal study		
	Breathlessness    -P	Breathlessness    -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:25	Respiratory Rate:20	<b>RESPONSE:Fair</b>				
8.NAME : Raman		AGE: 54	SEX: Male	I.P.No:32116	NO.OF DAYS TREATED: 40	FROM: 26/5/05	TO: 4/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker			
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing            sneezing breathlessness since 6 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    :8600				

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

9.NAME : Chithirani Puthiran		AGE:62	SEX:Male	I.P.No:32115	NO.OF DAYS TREATED:38	FROM: 26/5/05	TO: 2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: cooli		
<b>Complaints &amp; Duration</b> Wheezing            Sneezing Cough with expectoration breathlessness since 6 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>			<b>AFTER TREATMENT</b>	
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    : 9000        cells/cum DC    : P: 62% L: 38% E: 4 % ESR    : ½hr :8mm        1hr :16 mm Hb    : 72        %			<b>BLOOD</b> TC    : 9100        cells/cum DC    : P:64 % L: 33% E:3 % ESR    : ½hr :7mm        1hr :14 mm Hb    : 72        %	
	Sputum                    -W	Sputum                    -A	Bl.Sugar (R)            :155        mgs% Bl.Urea                    :24        mgs% Serum Cholestrol:212        mgs%			Bl.Sugar (R)            :150        mgs% Bl.Urea                    :24        mgs% Serum Cholestrol:210        mgs%	
	Breathlessness    -P	Breathlessness    -A	<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :1-2 pus cells			<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :NAD	
	Rhonchi -P	Rhonchi -A	CHEST X-RAY                :Bronchitis SPUTUM FOR AFB            :Negative MANTOUX                    :Negative			CHEST X-RAY                :Normal study	
	Respiratory Rate:25	Respiratory Rate:20	<b>RESPONSE:Good</b>				
10.NAME : Subbiah		AGE: 66	SEX:Male	I.P.No:33257	NO.OF DAYS TREATED:30	FROM: 2/6/05	TO: 2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: Beedi Worker		
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing            sneezing breathlessness since 8 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>			<b>AFTER TREATMENT</b>	
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    :9800                cells/cum DC    : P: 65 % L: 30 % E: 5 % ESR    : ½hr :10 mm        1hr :22 mm Hb    : 68        %			<b>BLOOD</b> TC    : 9900        cells/cum DC    : P: 65 % L: 32 % E: 3 % ESR    : ½hr :14 mm        1hr :28 mm Hb    : 69        %	
	Sputum                    -W	Sputum                    -A	Bl.Sugar (R)            :162        mgs% Bl.Urea                    :24        mgs% Serum Cholestrol:210        mgs%			Bl.Sugar (R)            :160        mgs% Bl.Urea                    :24        mgs% Serum Cholestrol:208        mgs%	
	Breathlessness    -P	Breathlessness    -A	<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :3-5 pus cells			<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :1-2 pus cells	
	Rhonchi -P	Rhonchi -A	CHEST X-RAY                :Bronchitis SPUTUM FOR AFB            :Negative MANTOUX                    :Negative			CHEST X-RAY                :Normal study	
	Respiratory Rate:23	Respiratory Rate:17	<b>RESPONSE:Good</b>				

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

11.NAME :Muthaiya		AGE:45	SEX:Male	I.P.No:33303	NO.OF DAYS TREATED:33	FROM: 2/6/05	TO: 5/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Cotton worker				
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 7 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-A	BLOOD TC : 9000 cells/cum DC : P: 62% L: 38% E: 4 % ESR : ½hr :8mm 1hr :16 mm Hb : 72 % Bl.Sugar (R) :155 mgs% Bl.Urea :24 mgs% Serum Cholestrol:212 mgs%		BLOOD TC : 9100 cells/cum DC : P:64 % L: 33% E:3 % ESR : ½hr : 7mm 1hr :14 mm Hb : 72 % Bl.Sugar (R) :150 mgs% Bl.Urea :24 mgs% Serum Cholestrol:210 mgs%	
	Sputum	-W	Sputum	-A	URINE Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		URINE Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:25		Respiratory Rate:20		RESPONSE:Good			
12.NAME :Raji		AGE: 25	SEX:Female	I.P.No:33290	NO.OF DAYS TREATED:32	FROM: 2/6/05	TO: 4/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker				
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 8 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-A	BLOOD TC :9800 cells/cum DC : P: 65 % L: 30 % E: 5 % ESR : ½hr :10 mm 1hr :22 mm Hb : 68 % Bl.Sugar (R) :162 mgs% Bl.Urea :24 mgs% Serum Cholestrol:210 mgs%		BLOOD TC : 9900 cells/cum DC : P: 65 % L: 32 % E: 3 % ESR : ½hr :14 mm 1hr : 28 mm Hb : 69 % Bl.Sugar (R) :160 mgs% Bl.Urea :24 mgs% Serum Cholestrol:208 mgs%	
	Sputum	-W	Sputum	-A	URINE Albumin :Nil Sugar :Nil Deposits :3-5 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		URINE Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:23		Respiratory Rate:17		RESPONSE:Good			

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

13.NAME :Gurumanikkam		AGE: 34	SEX:Male	O.P.No:33355	NO.OF DAYS TREATED: 32	FROM: 2/6/05	TO: 3/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi worker			
<b>Complaints &amp; Duration</b> Wheezing            Sneezing Cough with expectoration breathlessness since 2 year	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    : 8300        cells/cum DC    : P: 59% L: 34% E: 7 % ESR    : ½hr :11mm        1hr :22 mm Hb    : 70        % Bl.Sugar (R)            :170        mgs% Bl.Urea                :22        mgs% Serum Cholestrol:210        mgs%		<b>BLOOD</b> TC    : 8300        cells/cum DC    : P:59 % L: 34% E: 7 % ESR    : ½hr : 11mm        1hr :22 mm Hb    : 70        % Bl.Sugar (R)            :170        mgs% Bl.Urea                :22        mgs% Serum Cholestrol:210        mgs%		
	Sputum                    -W	Sputum                    -A	<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :1-2 pus cells CHEST X-RAY                :Bronchitis SPUTUM FOR AFB            :Negative MANTOUX                    :Negative		<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :NAD CHEST X-RAY                :Normal study		
	Breathlessness    -P	Breathlessness    -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:25	Respiratory Rate:18	<b>RESPONSE:Good</b>				
14.AME :Sundarsighn		AGE: 58	SEX:Male	I.P.No:33258	NO.OF DAYS TREATED: 32	FROM: 2/6/05	TO: 4/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker			
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing            sneezing breathlessness since 1 1/2years	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough                    -P	Cough                    -A	<b>BLOOD</b> TC    :8600                cells/cum DC    : P: 58        % L: 38 % E:4        % ESR    : ½hr :12 mm        1hr : 25        mm Hb    : 78        % Bl.Sugar (R)            :180        mgs% Bl.Urea                :25        mgs% Serum Cholestrol:230        mgs%		<b>BLOOD</b> TC    : 8700        cells/cum DC    : P:59        % L: 38        % E: 3        % ESR    : ½hr :10        mm        1hr :23        mm Hb    : 78        % Bl.Sugar (R)            :170        mgs% Bl.Urea                :24        mgs% Serum Cholestrol:225        mgs%		
	Sputum                    -W	Sputum                    -A	<b>URINE</b> Albumin                    :Nil Sugar                        :Nil Deposits                    :3-5 pus cells CHEST X-RAY                :Bronchitis SPUTUM FOR AFB            :Negative MANTOUX                    :Negative		<b>URINE</b> Albumin                    :Nil Sugar                        :+ Deposits                    :NAD CHEST X-RAY                :Normal study		
	Breathlessness    -P	Breathlessness    -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:24	Respiratory Rate:17	<b>RESPONSE:Good</b>				

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

15.NAME : Vasantha		AGE: 45	SEX:Female	O.P.No:34543	NO.OF DAYS TREATED:24	FROM:9/6/05	TO: 2/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: cooli				
<b>Complaints &amp; Duration</b> Wheezing Sneezing Cough with expectoration breathlessness since 4 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>					
	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 8600 cells/cum DC : P: 60% L: 35% E: 5 % ESR : ½hr :11mm 1hr :22 mm Hb : 70 % Bl.Sugar (R) :170 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%		<b>BLOOD</b> TC : 8300 cells/cum DC : P:62 % L: 34% E: 4 % ESR : ½hr : 11mm 1hr :22 mm Hb : 70 % Bl.Sugar (R) :170 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%	
	Sputum	-W	Sputum	-A	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Chronic bronchits SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:23		Respiratory Rate:18		<b>RESPONSE:Good</b>			
16.NAME : Sankar		AGE:33	SEX:Male	O.P.No:34572	NO.OF DAYS TREATED:30	FROM:9/6/05	TO: 2/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker				
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing sneezing breathlessness since 8 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>					
	<b>BEFORETREATMENT</b>		<b>AFTER TREATMENT</b>		<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 8600 cells/cum DC : P: 64 % L: 32 % E:4 % ESR : ½hr :12 mm 1hr :24mm Hb : 71 % Bl.Sugar (R) :150 mgs% Bl.Urea :21 mgs% Serum Cholestrol:225 mgs%		<b>BLOOD</b> TC : 8600 cells/cum DC : P: 6 5 % L:32 % E: 3 % ESR : ½hr : 10 mm 1hr :20 mm Hb :71 % Bl.Sugar (R) :150 mgs% Bl.Urea :21 mgs% Serum Cholestrol:225 mgs%	
	Sputum	-W	Sputum	-A	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :3-5 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:23		Respiratory Rate:19		<b>RESPONSE:Good</b>			

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# **OUT-PATIENTS**

17.NAME : Gopal		AGE: 35	SEX:Male	O.P.No:32087	NO.OF DAYS TREATED: 40	FROM: 26/5/05	TO: 4/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: cooli		
<b>Complaints &amp; Duration</b> Wheezing Sneezing Cough with expectoration breathlessness since 5 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>			<b>AFTER TREATMENT</b>	
	Cough -P	Cough -A	<b>BLOOD</b> TC : 8600 cells/cum DC : P: 60% L: 35% E: 5 % ESR : ½hr :11mm 1hr :22 mm Hb : 70 % Bl.Sugar (R) :170 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%			<b>BLOOD</b> TC : 8300 cells/cum DC : P:62 % L: 34% E: 4 % ESR : ½hr : 11mm 1hr :22 mm Hb : 70 % Bl.Sugar (R) :170 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%	
	Sputum -W	Sputum -A	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Chronic bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative			<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:24	Respiratory Rate:18				<b>RESPONSE:Good</b>	
18.NAME : Kanapathi		AGE:70	SEX:Male	O.P.No:32107	NO.OF DAYS TREATED: 37	FROM: 26/5/05	TO:2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: Beedi Worker		
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing sneezing breathlessness since 9 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>			<b>AFTER TREATMENT</b>	
	Cough -P	Cough -A	<b>BLOOD</b> TC : 8600 cells/cum DC : P: 64 % L: 32 % E:4 % ESR : ½hr :12 mm 1hr :24mm Hb : 71 % Bl.Sugar (R) :150 mgs% Bl.Urea :21 mgs% Serum Cholestrol:225 mgs%			<b>BLOOD</b> TC : 8600 cells/cum DC : P: 65 % L:32 % E: 3 % ESR : ½hr : 10 mm 1hr :20 mm Hb :71 % Bl.Sugar (R) :150 mgs% Bl.Urea :21 mgs% Serum Cholestrol:225 mgs%	
	Sputum -W	Sputum -A	<b>URINE</b> Albumin :Trace Sugar :Nil Deposits :3-5 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative			<b>URINE</b> Albumin :Trace Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:23	Respiratory Rate:17				<b>RESPONSE:Good</b>	

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

# OUT-PATIENTS

19.NAME :Pichiya		AGE: 65	SEX:Male	O.P.No:33240	NO.OF DAYS TREATED: 33	FROM: 2/6/05	TO: 5/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Cotton Worker				
Complaints & Duration Cough with expectoration breathlessness wheezing sneezing since 7 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-A	BLOOD TC : 8500 cells/cum DC : P: 60% L: 35% E:5 % ESR : ½hr :8mm 1hr :16 mm Hb : 80 % Bl.Sugar (R) :150 mgs% Bl.Urea :30 mgs% Serum Cholestrol:250 mgs%		BLOOD TC : 8600 cells/cum DC : P:61 % L: 36% E: 3 % ESR : ½hr : 7mm 1hr :14 mm Hb : 80 % Bl.Sugar (R) :150 mgs% Bl.Urea :22 mgs% Serum Cholestrol:210 mgs%	
	Sputum	-W	Sputum	-A	URINE Albumin :Nil Sugar :Nil Deposits :1-2 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		URINE Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:24		Respiratory Rate:18		RESPONSE:Good			
20.NAME : Krishnammal		AGE: 60	SEX:Female	O.P.No:35355	NO.OF DAYS TREATED:21	FROM:14/6/05	TO: 4/7 /05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Cooli				
Complaints & Duration Sneezing wheezing Cough with expectoration breathlessness since 4 years	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-P	BLOOD TC : 11800 cells/cum DC : P: 78 % L: 17 % E: 5 % ESR : ½hr : 10 mm 1hr :20 mm Hb : 77 % Bl.Sugar (R) :130 mgs% Bl.Urea :25 mgs% Serum Cholestrol:200 mgs%		BLOOD TC :11800 cells/cum DC : P: 78 % L: 18 % E: 4 % ESR : ½hr : 8 mm 1hr : 16 mm Hb : 77 % Bl.Sugar (R) :130 mgs% Bl.Urea :24 mgs% Serum Cholestrol:190 mgs%	
	Sputum	-W	Sputum	-W	URINE Albumin :Nil Sugar :Nil Deposits :3-5 pus cells CHEST X-RAY :Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		URINE Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-R				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:24		Respiratory Rate:20		RESPONSE:Fair			

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms



# OUT-PATIENTS

21.NAME : Thagasami		AGE: 84	SEX:Male	I.P.No: 9666	NO.OF DAYS TREATED: 45	FROM: 12/5/05	TO: 22/6/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: cooli				
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 6 years	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
			BEFORE TREATMENT		AFTER TREATMENT			
	Cough -P		Cough -A		BLOOD		BLOOD	
					TC : 8300 cells/cum		TC : 8300 cells/cum	
					DC : P: 59% L: 34% E: 7 %		DC : P:59 % L: 34% E: 7 %	
					ESR : ½hr :11mm 1hr :22 mm		ESR : ½hr : 11mm 1hr :22 mm	
					Hb : 70 %		Hb : 70 %	
Sputum -W		Sputum -W		Bl.Sugar (R) :170 mgs%		Bl.Sugar (R) :170 mgs%		
				Bl.Urea :22 mgs%		Bl.Urea :22 mgs%		
				Serum Cholestrol:210 mgs%		Serum Cholestrol:210 mgs%		
Breathlessness -P		Breathlessness -R		URINE		URINE		
				Albumin :Nil		Albumin :Nil		
				Sugar :Nil		Sugar :Nil		
				Deposits :1-2 pus cells		Deposits :NAD		
Rhonchi -P		Rhonchi -A		CHEST X-RAY :Chronic bronchitis		CHEST X-RAY :Normal study		
				SPUTUM FOR AFB :Negative				
Respiratory Rate:25		Respiratory Rate:20		MANTOUX :Negative		RESPONSE:Fair		
22.NAME : S.Arumugam		AGE: 50	SEX:Male	I.P.No:29687	NO.OF DAYS TREATED: 43	FROM: 12/5/05	TO: 20/6/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker				
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 6 months	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
			BEFORE TREATMENT		AFTER TREATMENT			
	Cough -P		Cough -A		BLOOD		BLOOD	
					TC : 9000 cells/cum		TC : 9000 cells/cum	
					DC : P:60 % L: 34 % E:4 %		DC : P: 61 % L: 35 % E: 2 %	
					ESR : ½hr : 10 mm 1hr :20 mm		ESR : ½hr : 9 mm 1hr :19 mm	
					Hb : 68 %		Hb : 69 %	
Sputum -W		Sputum -A		Bl.Sugar (R) :140 mgs%		Bl.Sugar (R) :140 mgs%		
				Bl.Urea :22 mgs%		Bl.Urea :22 mgs%		
				Serum Cholestrol:210 mgs%		Serum Cholestrol:210 mgs%		
Breathlessness -P		Breathlessness -A		URINE		URINE		
				Albumin :Nil		Albumin :Nil		
				Sugar :Nil		Sugar :Nil		
				Deposits :3-5 pus cells		Deposits :NAD		
Rhonchi -P		Rhonchi -A		CHEST X-RAY :bronchitis		CHEST X-RAY :Normal study		
				SPUTUM FOR AFB :Negative		RESPONSE:Good		
Respiratory Rate:24		Respiratory Rate:18		MANTOUX :Negative				

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

23.NAME : Prema		AGE:58	SEX:Female	I.P.No: 33246	NO.OF DAYS TREATED: 33	FROM: 2/6/05	TO: 5/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Former			
<b>Complaints &amp; Duration</b> Wheezing Sneezing Cough with expectoration breathlessness since 4 Months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough -P	Cough -A	<b>BLOOD</b> TC : 8500 cells/cum DC : P: 60% L: 35% E: 5 % ESR : ½hr :11mm 1hr :22 mm Hb : 72 % Bl.Sugar (R) :180 mgs% Bl.Urea :38 mgs% Serum Cholestrol:178 mgs%		<b>BLOOD</b> TC : 8500 cells/cum DC : P:61 % L: 38% E: 3 % ESR : ½hr : 10mm 1hr :20 mm Hb : 72 % Bl.Sugar (R) :150 mgs% Bl.Urea :25 mgs% Serum Cholestrol:160 mgs%		
	Sputum -Y	Sputum -A	<b>URINE</b> Albumin :Nil Sugar :++ Deposits :1-2 pus cells CHEST X-RAY : Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :+ Deposits :1-2 pus cells CHEST X-RAY :Normal study		
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:23	Respiratory Rate:19			<b>RESPONSE:Good</b>		
24. NAME : Sivagami		AGE: 50	SEX:Female	I.P.No:33260	NO.OF DAYS TREATED: 30	FROM: 2/6/05	TO: 2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker			
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing sneezing breathlessness since 7 months	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>				
	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		
	Cough -P	Cough -A	<b>BLOOD</b> TC : 8200 cells/cum DC : P:62 % L: 36 % E:6 % ESR : ½hr : 10 mm 1hr :20 mm Hb : 70 % Bl.Sugar (R) :130 mgs% Bl.Urea :22 mgs% Serum Cholestrol:205 mgs%		<b>BLOOD</b> TC : 8100 cells/cum DC : P: 63 % L: 35 % E: 2 % ESR : ½hr : 6 mm 1hr :12 mm Hb : 71 % Bl.Sugar (R) :130 mgs% Bl.Urea :20 mgs% Serum Cholestrol:200 mgs%		
	Sputum -Y	Sputum -A	<b>URINE</b> Albumin :Nil Sugar :+ Deposits :NAD CHEST X-RAY :bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		<b>URINE</b> Albumin :Nil Sugar :+ Deposits :NAD CHEST X-RAY :Normal study		
	Breathlessness -P	Breathlessness -A					
	Rhonchi -P	Rhonchi -A					
	Respiratory Rate:24	Respiratory Rate:18			<b>RESPONSE:Good</b>		

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

25.NAME : Chithirai Selvi		AGE:52	SEX:Female	I.P.No: 32118	NO.OF DAYS TREATED: 38	FROM: 26/5/05	TO: 2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Former			
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 2 Years.	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION				
	BEFORE TREATMENT	AFTER TREATMENT	BEFORE TREATMENT		AFTER TREATMENT		
	Cough -P	Cough -A	BLOOD TC : 8100 cells/cum DC : P: 62% L: 34% E: 4 % ESR : ½hr :12mm 1hr :24 mm Hb : 70 %		BLOOD TC : 8300 cells/cum DC : P:63 % L: 35% E: 2 % ESR : ½hr : 10mm 1hr :20 mm Hb : 72 %		
	Sputum -Y	Sputum -A	Bl.Sugar (R) :160 mgs% Bl.Urea :20 mgs% Serum Cholestrol:221 mgs%		Bl.Sugar (R) :140 mgs% Bl.Urea :22 mgs% Serum Cholestrol:220 mgs%		
	Breathlessness -P	Breathlessness -A	URINE Albumin :Nil Sugar :+ Deposits :1-2 pus cells		URINE Albumin :Nil Sugar :Nil Deposits :1-2 pus cells		
	Rhonchi -P	Rhonchi -A	CHEST X-RAY : Bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		CHEST X-RAY :Normal study		
	Respiratory Rate:22	Respiratory Rate:18	RESPONSE:Good				
26.NAME : Selvi		AGE: 56	SEX:Female	I.P.No:32105	NO.OF DAYS TREATED: 38	FROM: 26/5/05	TO: 2/7/05
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker			
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 1Years.	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION				
	BEFORE TREATMENT	AFTER TREATMENT	BEFORE TREATMENT		AFTER TREATMENT		
	Cough -P	Cough -A	BLOOD TC : 9200 cells/cum DC : P:64 % L: 30 % E:6 % ESR : ½hr : 12 mm 1hr :24 mm Hb : 72 %		BLOOD TC : 9300 cells/cum DC : P: 65 % L: 33 % E: 2 % ESR : ½hr : 10 mm 1hr :20 mm Hb : 72 %		
	Sputum -Y	Sputum -A	Bl.Sugar (R) :132 mgs% Bl.Urea :19 mgs% Serum Cholestrol:230 mgs%		Bl.Sugar (R) :130 mgs% Bl.Urea :23 mgs% Serum Cholestrol:200 mgs%		
	Breathlessness -P	Breathlessness -A	URINE Albumin :Nil Sugar :Nil Deposits :NAD		URINE Albumin :Nil Sugar :Nil Deposits :NAD		
	Rhonchi -P	Rhonchi -A	CHEST X-RAY :bronchitis SPUTUM FOR AFB :Negative MANTOUX :Negative		CHEST X-RAY :Normal study		
	Respiratory Rate:24	Respiratory Rate:18	RESPONSE:Good				

P : Present      W : Whitish  
 R : Reduced      Y : Yellowish  
 A : Absent

Good Response : Significant amelioration of signs & symptoms  
 Fair Response : Partial amelioration of signs & symptoms  
 Poor Response : Insignificant amelioration of signs & symptoms

27.NAME : Maragatham		AGE:41	SEX:Female	I.P.No: 32062	NO.OF DAYS TREATED: 40	FROM: 26/5/05	TO: 4/7/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: Former			
Complaints & Duration Wheezing Sneezing Cough with expectoration breathlessness since 2 Years.	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 8600 cells/cum DC : P: 58% L: 33% E: 9 % ESR : ½hr :15mm 1hr :30 mm Hb : 69 %		<b>BLOOD</b> TC : 8600 cells/cum DC : P:61 % L: 38% E: 3 % ESR : ½hr : 10mm 1hr :20 mm Hb : 72 %	
	Sputum	-Y	Sputum	-A	Bl.Sugar (R) :162 mgs% Bl.Urea :21 mgs% Serum Cholestrol:227 mgs%		Bl.Sugar (R) :150 mgs% Bl.Urea :25 mgs% Serum Cholestrol:160 mgs%	
	Breathlessness	-P	Breathlessness	-A	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :1-2 pus cells		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :1-2 pus cells	
	Rhonchi	-P	Rhonchi	-A	CHEST X-RAY : Bronchits SPUTUM FOR AFB :Negative MANTOUX :Negative		CHEST X-RAY :Normal study	
	Respiratory Rate:22		Respiratory Rate:19		<b>RESPONSE:Good</b>			
28.NAME : Geetha		AGE: 53	SEX:Female	I.P.No:32100	NO.OF DAYS TREATED: 34	FROM: 26/5/05	TO: 28/6/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal			OCCUPATION: Beedi Worker			
Complaints & Duration Cough with expectoration Wheezing sneezing breathlessness since 1 Years.	RESPIRATORY SYSTEM EXAMINATION		INVESTIGATION					
	BEFORE TREATMENT		AFTER TREATMENT		BEFORE TREATMENT		AFTER TREATMENT	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 10000 cells/cum DC : P:71 % L: 22 % E:7 % ESR : ½hr : 17 mm 1hr :35 mm Hb : 74 %		<b>BLOOD</b> TC : 10200 cells/cum DC : P: 73 % L: 25 % E: 2 % ESR : ½hr : 11 mm 1hr :22 mm Hb : 74 %	
	Sputum	-Y	Sputum	-A	Bl.Sugar (R) :155 mgs% Bl.Urea :30 mgs% Serum Cholestrol:222 mgs%		Bl.Sugar (R) :150 mgs% Bl.Urea :22 mgs% Serum Cholestrol:204 mgs%	
	Breathlessness	-P	Breathlessness	-A	<b>URINE</b> Albumin :Nil Sugar :+ Deposits :NAD		<b>URINE</b> Albumin :Nil Sugar :+ Deposits :NAD	
	Rhonchi	-P	Rhonchi	-A	CHEST X-RAY :bronchitis SPUTUM FOR AFB :Negative		CHEST X-RAY :Normal study	
	Respiratory Rate:23		Respiratory Rate:18		MANTOUX :Negative		<b>RESPONSE:Good</b>	

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

29.NAME : Ramaie		AGE:60	SEX:Female	I.P.No: 29918	NO.OF DAYS TREATED: 39	FROM: 12/5/05	TO: 20/6/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Former				
<b>Complaints &amp; Duration</b> <b>Wheezing       Sneezing</b> <b>Cough with expectoration</b> <b>breathlessness since 7</b> <b>Months</b>	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>					
	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 8300    cells/cum DC : P: 60% L: 35% E: 5 % ESR : ½hr :8mm    1hr :16 mm Hb : 73    % Bl.Sugar (R) :130       mgs% Bl.Urea       :20       mgs% Serum Cholestrol:227       mgs%		<b>BLOOD</b> TC : 8500    cells/cum DC : P:61 % L: 38% E: 3 % ESR : ½hr : 10mm    1hr :20 mm Hb : 72    % Bl.Sugar (R) :150       mgs% Bl.Urea       :25       mgs% Serum Cholestrol:160       mgs%	
	Sputum	-W	Sputum	-A	<b>URINE</b> Albumin                                :Nil Sugar                                    :+ Deposits                                :1-2 pus cells CHEST X-RAY                        : Bronchits SPUTUM FOR AFB                    :Negative MANTOUX                               :Negative		<b>URINE</b> Albumin                                :Nil Sugar                                    :+ Deposits                                :1-2 pus cells CHEST X-RAY                        :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:	22	Respiratory Rate:	19				
							<b>RESPONSE:Good</b>	

30.NAME : Kannagi		AGE: 48	SEX:Female	I.P.No:29924	NO.OF DAYS TREATED: 38	FROM: 19/5/05	TO: 25/6/05	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water		DIAGNOSIS: Eraippu Irumal		OCCUPATION: Beedi Worker				
<b>Complaints &amp; Duration</b> Cough with expectoration Wheezing sneezing breathlessness since 4 Years.	<b>RESPIRATORY SYSTEM EXAMINATION</b>		<b>INVESTIGATION</b>					
	<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>		<b>BEFORE TREATMENT</b>		<b>AFTER TREATMENT</b>	
	Cough	-P	Cough	-A	<b>BLOOD</b> TC : 9100 cells/cum DC : P:70 % L: 23 % E:7 % ESR : ½hr : 13 mm 1hr :29 mm Hb : 70 % Bl.Sugar (R) :140 mgs% Bl.Urea :21 mgs% Serum Cholestrol:216 mgs%		<b>BLOOD</b> TC : 9400 cells/cum DC : P: 70 % L: 27 % E: 3 % ESR : ½hr : 11 mm 1hr :22 mm Hb : 70 % Bl.Sugar (R) :135 mgs% Bl.Urea :20 mgs% Serum Cholestrol:218 mgs%	
	Sputum	-W	Sputum	-A	<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :bronchitis SPUTUM FOR AFB :Negative		<b>URINE</b> Albumin :Nil Sugar :Nil Deposits :NAD CHEST X-RAY :Normal study	
	Breathlessness	-P	Breathlessness	-A				
	Rhonchi	-P	Rhonchi	-A				
	Respiratory Rate:	23	Respiratory Rate:	18	MANTOUX :Negative		<b>RESPONSE:Good</b>	

P : Present  
R : Reduced  
A : Absent

W : Whitish  
Y : Yellowish

Good Response : Significant amelioration of signs & symptoms  
Fair Response : Partial amelioration of signs & symptoms  
Poor Response : Insignificant amelioration of signs & symptoms

## IN-PATIENTS

NAME :Bakiyaraj			AGE:59			SEX:Male		I.P.No:1022		NO.OF DAYS TREATED:27		FROM:21/4/08		TO:17/5/08							
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water										DIAGNOSIS: Eraipu Erumal						OCCUPATION: Cooli					
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing chest tightness general weakness since 6 months  <b>HISTORY</b> No relavent history				<b>INVESTIGATION</b>																	
				<b>BEFORE TREATMENT</b>						<b>AFTER TREATMENT</b>											
				<b>BLOOD</b> TC :10800 cells/cumm DC : P : 65 % L: 25 % E :10 % ESR : ½hr : 14 mm 1hr :28 mm Hb : 70%						<b>BLOOD</b> TC :10900 cells/cumm DC : P :70 % L:28 % E :2 % ESR : ½hr :10 mm 1hr :20 mm Hb : 71 %											
				Bl.Sugar (R) :150 mgs% Bl.Urea :22 mgs% Serum Cholestrol :225 mgs%						Bl.Sugar (R) :145 mgs% Bl.Urea :21 mgs% Serum Cholestrol :220 mgs%											
				<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD						<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD											
				<b>DIET</b> MIXED DIET						<b>CHEST X-RAY : Bronchitis</b> <b>SPUTUM FOR AFB : Negative</b> <b>MANTOUX : Negative</b>						<b>CHEST-X RAY : Normal study</b>  <b>RESPONSE : Good</b>					
				Days		On Admission		3 <sup>rd</sup>	6 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	15 <sup>th</sup>	18 <sup>th</sup>	21 <sup>st</sup>	24 <sup>th</sup>	27 <sup>th</sup>	30th				
Cough		P		P	P	P	P	R	R	R	A	A									
Breathlessness		+++		+++	+++	++	++	++	++	+	-	-									
Sputum	Colour	Y		Y	Y	Y	Y	W	W	W	W	W									
	Quantity	5 ml		5 ml	4 ml	4 ml	4 ml	3 ml	3 ml	3 ml	2 ml	2 ml									
Rhonchi		P		P	P	P	P	P	P	R	R	-									
Respiratory Rate		24		24	24	23	23	22	22	22	20	19									

Good Response : Significant amelioration of signs & symptoms

Fair Response : Partial amelioratino of signs and symptoms

Moderate

Poor Response : Insignificant amelioration of signs and symptoms

P - Present

R - Reduced

A - Absent

W - Whitish

Y - Yellowish

+ - Mild

++ -

+++ - Severe

## IN-PATIENTS

NAME :Palaniammal			AGE:52		SEX:Female		I.P.No:997		NO.OF DAYS TREATED:30		FROM:17/4/08		TO:16/5/08	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water			DIAGNOSIS: Eraipu Erumal						OCCUPATION: Cooli					
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing chest tightness general weakness since 7 months  <b>HISTORY</b> No relavent history			<b>INVESTIGATION</b>											
			<b>BEFORE TREATMENT</b>						<b>AFTER TREATMENT</b>					
			<b>BLOOD</b> TC :10000 cells/cumm DC : P : 68 % L: 24 % E :8 % ESR : ½hr : 15 mm 1hr :30 mm Hb : 69%						<b>BLOOD</b> TC :10100 cells/cumm DC : P :69 % L:28 % E :3 % ESR : ½hr :10 mm 1hr : 20 mm Hb : 70 %					
			Bl.Sugar (R) :145 mgs% Bl.Urea :20 mgs% Serum Cholestrol :220 mgs%						Bl.Sugar (R) :140 mgs% Bl.Urea :20 mgs% Serum Cholestrol :210 mgs%					
			<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : 1-3 epithelial cells						<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD					
			<b>CHEST X-RAY</b> : Bronchitis <b>SPUTUM FOR AFB</b> : Negative <b>MANTOUX</b> : Negative						<b>CHEST-X RAY</b> : Normal study					
			<b>RESPONSE</b> : Good											
DIET MIXED DIET														
Days		On Admission	3 <sup>rd</sup>	6 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	15 <sup>th</sup>	18 <sup>th</sup>	21 <sup>st</sup>	24 <sup>th</sup>	27 <sup>th</sup>	30 <sup>th</sup>		
Cough		P	P	P	P	P	R	R	R	A	A	A		
Breathlessness		+++	+++	+++	++	++	++	++	+	-	-	-		
Sputum	Colour	Y	Y	Y	Y	Y	W	W	W	W	W	-		
	Quantity	5 ml	5 ml	4 ml	4 ml	4 ml	3 ml	3 ml	3 ml	2 ml	2 ml	-		
Rhonchi		P	P	P	P	P	P	P	R	R	-	-		
Respiratory Rate		24	24	24	23	23	22	22	22	20	19	18		

Good Response : Significant amelioration of signs & symptoms

Fair Response : Partial amelioratino of signs and symptoms

Moderate

Poor Response : Insignificant amelioration of signs and symptoms

P - Present

R - Reduced

A - Absent

W - Whitish

Y - Yellowish

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- Mild

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- Severe

## IN-PATIENTS

NAME :Muthupattan			AGE:65		SEX:Male		I.P.No:1014		NO.OF DAYS TREATED:30		FROM:21/4/08		TO:20/5/08				
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water							DIAGNOSIS: Eraipu Erumal							OCCUPATION: Beedi Worker			
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing chest tightness general weakness since 9 months  <b>HISTORY</b> Chronic Smoker			<b>INVESTIGATION</b>														
			<b>BEFORE TREATMENT</b>							<b>AFTER TREATMENT</b>							
			<b>BLOOD</b> TC :9900 cells/cumm DC : P : 68 % L: 28 % E :4 % ESR : ½hr : 18 mm 1hr :38 mm Hb : 71%							<b>BLOOD</b> TC :10000 cells/cumm DC : P :66 % L:32 % E :2 % ESR : ½hr :10 mm 1hr : 20 mm Hb : 71 %							
			Bl.Sugar (R) :120 mgs%							Bl.Sugar (R) :120 mgs%							
			Bl.Urea :20 mgs%							Bl.Urea :19 mgs%							
			Serum Cholestrol :165 mgs%							Serum Cholestrol :160 mgs%							
			<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : 1-3 epithelial cells							<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD							
			<b>CHEST X-RAY : Bronchitis</b>							<b>CHEST-X RAY : Normal study</b>							
			<b>SPUTUM FOR AFB : Negative</b>							<b>RESPONSE : Good</b>							
			<b>MANTOUX : Negative</b>														
Days		On Admission	3 <sup>rd</sup>	6 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	15 <sup>th</sup>	18 <sup>th</sup>	21 <sup>st</sup>	24 <sup>th</sup>	27 <sup>th</sup>	30 <sup>th</sup>					
Cough		P	P	P	P	P	R	R	R	A	A	A					
Breathlessness		+++	+++	+++	++	++	+	+	+	-	-	-					
Sputum	Colour	Y	Y	Y	W	W	W	W	W	W	W	-					
	Quantity	6 ml	6 ml	5 ml	5 ml	4 ml	4 ml	3 ml	3 ml	2 ml	2 ml	-					
Rhonchi		P	P	P	P	R	R	R	R	R	-	-					
Respiratory Rate		23	23	23	22	22	21	21	20	19	18	18					

Good Response : Significant amelioration of signs & symptoms

Fair Response : Partial amelioration of signs and symptoms

Moderate

Poor Response : Insignificant amelioration of signs and symptoms

P - Present

R - Reduced

A - Absent

W - Whitish

Y - Yellowish

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- Mild

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- Severe



## IN-PATIENTS

NAME :Maharasi			AGE:42		SEX:Female		I.P.No:999		NO.OF DAYS TREATED:27		FROM:18/4/08		TO:14/5/08	
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water			DIAGNOSIS: Eraipu Erumal						OCCUPATION: Cooli					
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing chest tightness general weakness since 2 years  <b>HISTORY</b> No revalent Family History			<b>INVESTIGATION</b>											
			<b>BEFORE TREATMENT</b>						<b>AFTER TREATMENT</b>					
			<b>BLOOD</b> TC :9000 cells/cumm DC : P : 60 % L: 36 % E :4 % ESR : ½hr : 12 mm 1hr :24 mm Hb : 69%						<b>BLOOD</b> TC :10000 cells/cumm DC : P :67 % L:31 % E :2 % ESR : ½hr :10 mm 1hr : 20 mm Hb : 71 %					
			Bl.Sugar (R) :130 mgs% Bl.Urea :19 mgs% Serum Cholestrol :165 mgs%						Bl.Sugar (R) :130 mgs% Bl.Urea :19 mgs% Serum Cholestrol :160 mgs%					
			<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : 1-3 epithelial cells						<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD					
			<b>DIET</b> MIXED DIET						<b>CHEST X-RAY</b> : Bronchitis <b>SPUTUM FOR AFB</b> : Negative <b>MANTOUX</b> : Negative					
									<b>CHEST-X RAY</b> : Normal study  <b>RESPONSE</b> : Good					
Days		On Admission	3 <sup>rd</sup>	6 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	15 <sup>th</sup>	18 <sup>th</sup>	21 <sup>st</sup>	24 <sup>th</sup>	27 <sup>th</sup>	30 <sup>th</sup>		
Cough		P	P	P	P	R	R	R	R	A	A			
Breathlessness		+++	+++	+++	++	++	+	+	+	-	-			
Sputum	Colour	Y	Y	Y	W	W	W	W	W	W	W			
	Quantity	5 ml	5 ml	5 ml	5 ml	4 ml	4 ml	3 ml	3 ml	2 ml	1 ml			
Rhonchi		P	P	P	P	R	R	R	R	R	-			
Respiratory Rate		23	23	23	22	22	21	21	20	19	17			

Good Response : Significant amelioration of signs & symptoms

Fair Response : Partial amelioratino of signs and symptoms

Moderate

Poor Response : Insignificant amelioration of signs and symptoms

P - Present

R - Reduced

A - Absent

W - Whitish

Y - Yellowish

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- Mild

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- Severe

## IN-PATIENTS

NAME :Ramakrishnan			AGE:52		SEX:Male		I.P.No:998		NO.OF DAYS TREATED:27		FROM:18/4/08		TO:14/5/08				
DRUG: Thrikadugu Mathirai 260mgm Bd with hot water			DIAGNOSIS: Eraipu Erumal						OCCUPATION: Cooli								
<b>Complaints &amp; Duration</b> Cough with expectoration breathlessness wheezing chest tightness general weakness since 5 years  <b>HISTORY</b> Chronic Smoker			<b>INVESTIGATION</b>														
			<b>BEFORE TREATMENT</b>					<b>AFTER TREATMENT</b>									
			<b>BLOOD</b> TC :10000 cells/cumm DC : P : 60 % L: 30 % E :10 % ESR : ½hr : 12 mm 1hr :24 mm Hb : 70% Bl.Sugar (R) :140 mgs% Bl.Urea :20 mgs% Serum Cholestrol :190 mgs%					<b>BLOOD</b> TC :10100 cells/cumm DC : P :64 % L:31 % E :5 % ESR : ½hr :10 mm 1hr : 20 mm Hb : 71 % Bl.Sugar (R) :130 mgs% Bl.Urea :20 mgs% Serum Cholestrol :190 mgs%									
			<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : 1-3 epithelial cells					<b>URINE</b> Albumin : Nil Sugar : Nil Deposits : NAD									
			<b>DIET</b> MIXED DIET					<b>CHEST X-RAY : Chronic Bronchitis</b> <b>SPUTUM FOR AFB : Negative</b> <b>MANTOUX : Negative</b>					<b>CHEST-X RAY : Bronchitis</b>  <b>RESPONSE : Fair</b>				
			Days		On Admission	3 <sup>rd</sup>	6 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	15 <sup>th</sup>	18 <sup>th</sup>	21 <sup>st</sup>	24 <sup>th</sup>	27 <sup>th</sup>	30th		
			Cough		P	P	P	P	R	R	R	R	A	A			
			Breathlessness		+++	+++	+++	+++	++	++	++	++	+	+			
			Sputum	Colour	Y	Y	Y	W	W	W	W	W	W	W			
				Quantity	8 ml	8 ml	8 ml	5 ml	4 ml	4 ml	3 ml	3 ml	3 ml	3 ml			
Rhonchi		P	P	P	P	R	R	R	R	R	-						
Respiratory Rate		23	23	23	22	22	21	21	20	19	19						

Good Response : Significant amelioration of signs & symptoms

Fair Response : Partial amelioration of signs and symptoms

Moderate

Poor Response : Insignificant amelioration of signs and symptoms

P - Present

R - Reduced

A - Absent

W - Whitish

Y - Yellowish

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- Mild

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- Severe

# BIO – STATISTICAL ANALYSIS OF THIRIKADUGU MATHIRAI Eraippu Erumal → Thirikadugu Mathirai

The chemical trials of Thirikadugu mathirai were analysed based on their age and sex. The results of the analysis are enumerated into the below table.

**Table-1**

## Age and Sexwise distribution of Eraippu Erumal Study subjects

Sl. No.	Sex	n	Age		‘t’	Significance	95% of the C.I. of pope and mean
			Mean	S.D.			
1	Male	19	55.36	15.06	1.357	P > 0.05	–
2	Female	6	46.17	12.15			
	<b>Total</b>	25	53.16	14.73	–	–	47.1 to 59.2 years.

The mean ages of male and female are  $55.36 \pm 15.06$  and  $46.17 \pm 12.15$  respectively. By observation, there is a difference between the mean ages between the sexes. But the difference is not statistically significant. That means in respect of age both sexes are equal and if there is any difference that may be due to sampling fluctuations. The Eraippu Erumal population mean age may be in between 47.1 to 59.2 years at 95% confidence interval.

### Related variables:

The related variables of Eraippu Erumal study subjects are Esenophillio, E.S.R and Respiratory rates. The three variables were recorded before and after the administrative of the drug Thirikadugu Mathirai. The observed results are posted in the below table.

**Table-2**

**The Eschino, E.S.R. ½ hour, E.S.R. 1 hour and Respiratory rates of study subjects before and after treatment (Percentage)**

Sl.No	Variable	n	Before Treatment		After Treatment		Difference of Mean	‘t’	Significance
			Mean	S.D.	Mean	S.D.			
1.	Eseinol	25	5.4	1.85	3.7	1.7	1.7	4.739	P < 0.000
2.	E.S.R. – ½ hour	25	11.6	2.2	9.8	1.3	1.8	4.688	P < 0.000
3.	E.S.R. – 1 hour	25	23.4	4.7	20.0	2.7	3.4	4.37	P < 0.000
4.	Respiratory rate	25	23.9	0.83	18.4	1.3	5.5	29.837	P < 0.000

The above analyses of variables before and after treatment clearly shows the following statistics. The mean Eseinophilia before and after treatment are  $5.4 \pm 1.83$  and  $3.7 \pm 1.7$ . The difference of mean is statistically significant. The mean E.S.R. 1 hour before and after treatment are recorded as  $23.4 \pm 4.7$  and  $20.0 \pm 2.7$  respectively. The difference between the E.S.R% is statistically highly significant. The respiratory rate before and after treatment is  $23.9 \pm 0.83$  and  $18.4 \pm 1.3$  respectively. The difference observed is statistically significant since the  $t=29.837$  and  $P < 0.000$ . The mean reductions of E.S.R and Respiratory rate are 1.7%, 3.4% and 5.5% respectively, and the reductions are statistically significant reductions of Esen. E.S.R and Respiratory rate are attributed to the effectiveness of the drug Thirikadugu Mathirai.

## DISCUSSION

The author chooses the disease Eraippu Erumal, one of the Kabha disease which is one among the 21 varieties.

According to Siddha concept, the basic abnormality of Eraippu Erumal is derangement of Kabha humour.

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Thus the affecting Kabha humour reflect the clinical symptoms like difficulty in breathing, wheezing, running nose, sneezing and cough with scanty expectoration.

This signs and symptoms were relieved by the administration of the drug “Thirikadugu Mathirai”.

The literature collections were collected from various literatures. From these information, the author has come to an idea about Thirikadugu Mathirai and its efficacy in Eraippu Erumal.

Bio-Chemical analysis showed that it contains Starch, Ferrous Iron, Amino Acid and unsaturated compounds.

Pharmacological analysis shows that the Thirikadugu Mathirai has got moderate anti spasmodic effect and antihistamine effect.

In this clinic study out of 20 cases suffered from Eraipu Erumal 16 (80%) showed good response of sign and symptoms and 3 cases (15%) showed fair response & 1 case (5%) showed poor response to drug.

During the treatment, the patients have no signs and symptoms of toxic effect. Non toxic nature of this trial drug in the recommended dose was found to be effective even after the withdrawal of the medicine.

## SUMMARY

- The drug Thirikadugu Mathirai has been taken to the study to establish its efficacy in Eraippu Erumal as the important aspect of this dissertation work. The dose of the Thirikadugu Mathirai 260 mgm two times a day (BD) with hot water after diet.
- A review of literature about the drug and its significance in medicine in ancient days, collected information about the drug and various literatures were referred.
- Bio Chemical analysis showed the drug has got Starch, Ferrous Iron, Amino Acid, Unsaturated Compounds are helpful in its valuable clinical effects.
- Pharmacological analysis established that the drug has got moderate anti-spasmodic and antihistamine effects.
- From the clinical assessment, it is inferred that the drug has a marked response in Eraippu Erumal. During the clinical trial author also inferred that the drug has no known contradictions. The drug has no adverse effect.

## CONCLUSION

It is concluded that the drug Thirikadugu Mathirai has got significant **anti-spasmodic and anti-histamine action** and clinically it is an effective drug in Eraippu Erumal for reducing its severity and difficulties.



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